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"L'Histoire de l'Habitation" at the Paris Exhibition.

A GOOD deal of interest has been excited about the series of model buildings representing the "Histoire de l'Habitation," arranged along the line of the Quai d'Orsay at the north end of the Champ de Mars, of which we gave some sketches last week, and of which further sketches will be found in our present number. There has not been seen before, collected in one place, such an extended series of built-up illustrations of the architecture of various periods and countries, constructed with so much trouble and in so solid a manner. At the same time, it must be said that the title of "History of the Habitation" given to this collection of models is rather misleading, and assumes a little too much. For the essential point in regard to a history of the house is the history of its interior development and plan, and this is not given in these model buildings, and could not have been given without an amount of space much greater than was available on the ground, and an expense which could not have been justified for a merely temporary exhibition. In illustrating primitive forms of house it is easy enough to give the whole arrangement of the habitation: but when we come to even the smaller dwelling-houses of civilised periods, the practical constructions necessary to illustrate these would be tolerably extensive and complicated, and would, in fact, have occupied a longer time to plan and put them together than was available in this case, independently of the question of space. And, without wishing to detract from the interest and even utility of this feature of the Exhibition, it must be added that there is not apparent in it any very extensive or minute archæological learning. The eminent architect under whose superintendence it was erected is a man of genius rather than a *savant*; and in an archæological sense it may be said that some men in Paris of less original genius than M. Garnier might have been better fitted by special knowledge to preside over and direct an exhibit of this kind. On the other hand it may be said that M. Garnier was the man to get it done within the allotted time, and that a more learned archæologist of less energy and resource might have planned a superior series of Habitation exhibits, but would very possibly never have got them carried out.

What we actually have, then, is a series of built illustrations of the actual forms of a good many primitive habitations of savage peoples, and a *résumé* of the main architectural features and character of a number of types of habitation of civilised peoples, without going in detail into the arrangement of the interiors. In some cases, indeed, the houses are closed from entry, in others they have been partially utilised as shops for the sale of various kinds of bric-à-brac; a certain proportion however, are open throughout.

At the eastern extremity of the site are found the representations of the most primitive forms of habitation; commencing with the mere natural cavern in the rock; then bushes and boughs piled in a lean-to form against the side of a rock, leaving a sheltered space underneath; then we have the house built up entirely of boughs sloped against one another to form a ridge. A bush house of this kind, covered outwardly with skins, and with a removable covering to the entrance formed by a skin, takes one a considerable step further; an approach to the time when, as Mr. Browning says in his admirable poetic *résumé* of the history of architecture in "Sordello," the inhabitant—

> "—— Dreams, and shapes
> His dream into a doorpost—just escapes
> The mystery of hinges:"

though this particular phase is not shown among the models, unless we take the lake-dwellings as an example. These are very well illustrated, an artificial pond (rather small, certainly) having been made, to give realism of effect. Into the ground are driven thick posts formed of unhewn trees, and a floor formed of cross poles; the walls of the huts being woven with rushes on a framing of boughs and twigs. If this is not *vero*, it is at all events *ben trovato*.

The buildings proper commence with an Egyptian house of the time of Sesostris, a cube with widely-projecting eaves with the angles carried by timber posts standing free from the building and imitating the general outline of the cap and turned-in base of an Egyptian granite column, but much elongated. The house is coloured white in the lower portion of the walls and buff over this, with the doors with deep red architraves and cavetto heads just breaking above the line of white wall. The upper portion shows an open loggia with small red colonettes, and the whole is crowned with an Egyptian coved cornice painted in parallel leaf patterns or stripes of blue, red, green, and yellow. The whole appears a conjecture of the form which a habitation of perishable materials may have taken as suggested by the study of the monumental architecture of Egypt. If not unanswerable, the whole is at all events an ingenious and picturesque deduction. Next follows an Assyrian house of about 700 B.C., with the vertical reeded wall ornament which modern archæologists are familiar with; white walls and a square projecting plinth; the sky-line of the house is in square masses, one with the castelled termination so frequently seen on Assyrian bas-reliefs, the other with a finish of nearly the outline of the Egyptian cornice, but with the leaf ornament modelled in flat relief instead of being defined in colour. The upper portion of the tower has also its loggia, with colonettes whose capitals give a hint of the Ionic capital, while a rude version of the Egyptian winged globe ornament appears on the wall beneath. A characteristic frieze of light-coloured tiles finishes the portion of the wall between the two towers. Altogether the historic and geographical relations of Assyria are very well suggested in this monument. The Phœnician house of 1000 B.C. follows, with a stone basement with square windows and with the Egyptian cornice as a surbase, and a wooden erection above containing many details resembling more or less the Assyrian details, but on which a good deal of imagination must have been brought to bear.

The Jewish house, of the same date as the last, has a rather Egyptian appearance in general mass (or perhaps we should say, rather, very Phœnician), with raking door and window jambs and the Egyptian section of cornice both over the door and on a large scale as the main cornice; but the decoration of the cavetto of the main cornice is quite different, consisting of a large alternating ornament broken by hemispheres in relief at intervals: by the door is a column, or rather pilaster, with a proto-Ionic capital, which at all events serves to remind one that Palestine was geographically contiguous to Asia Minor, though the detail is not very Hebrew in its associations. The flat house and balustrade round, the "house-top" of the Bible, is not forgotten, nor the stairs leading up to it. The Etruscan house of the same date (1000 B.C.) retains one feature of the Egyptian type, the door with sloping jambs,

but we are here getting more away from Oriental influences and approaching to early suggestions of Classic architecture. The angles of the stone basement are reinforced by angle pilasters, which also retain the Egyptian predilection for the sloping line, but they are rudely fluted in three channels (does M. Garnier intend this as a suggestion of the triglyph?); the capitals show a scroll not so much Ionic as giving the idea of the scroll of the Corinthian capital before the foliage grew; the capital terminates with a thick square abacus and a small ovolo moulding of rather clumsy form under it; and the section of the widely projecting cornice to the masonry portion is evidently intended as an indication of the early beginnings of the Classic cornice, but does not serve to explain the division of the latter into bed-mould, corona, and cymatium: it is a masonry landing built out, of great projection and great thickness, but arbitrarily shaped into two beds, the jointing at the edge showing the whole as in one piece. If it had been shown in two thicknesses, the lower acting as a corbel or bracket to the other, it would have indicated an original meaning to the construction of the Classic cornice; as it is, it certainly looks very like an antiquarian form invented backward, so to speak, from the finished form of the cornice. Above this is a timber-constructed hanging verandah hanging outwards, with a tiled roof, the wall being continued up on a line, or nearly so, with the basement wall. In the capitals of the basement angle pilasters, the outer volute is worked at an angle of 45 deg. as in the Greek angle Ionic column. We should very much doubt the existence of this feature at the date 1000 B.C.

In the rear of this Phœnician house is a rude stone Pelasgic habitation of *circa* 1500 B.C., in large unhewn masonry with roughly hewn jambs and lintel (sloping jambs to the door), and an angular "relieving arch" of two stones sloped to meet each over the lintel. Next we jump to the Hindu house of 300 B.C., a double-towered habitation with a flight of steps leading up to a door between the towers, the steps guarded at the edge by horizontal consoles flat side down; similar consoles with the flat side up support cornices above, carrying balconies with stone railings of the Sanchi tope type, which may or may not have been used in Hindu dwellings of this date; the assumption seems rather gratuitous. Above are balconies and loggie carried by bracket capitals and the inverted bell-shaped capital characteristic of a certain period of Hindu architecture, but hardly used in the same buildings, surely, as that in which the Sanchi tope railing was in use, this latter being, in fact, a Buddhist detail, and not Hindu at all.

After this comes one of the most interesting of the houses, called a Persian one of the fourth century B.C. This consists of a domed vestibule on elliptical arches, one of which forms the entry; the arches spring from coupled columns with a spiral ornament; the arches have no impost but such as can be said to be formed by the fact that the starting courses of the arches over-sail the walls or columns below, the arch being slightly corbelled out at its springing. The other portion of the building is an oblong compartment divided externally into three bays by semicircular half-columns, all in brick and with square brick over-sailing capitals; wall arches between with small windows in the upper part of each bay; internally this compartment is roofed by solid brick arches after the manner of principals across the apartment, corresponding with the half-columns outside, and the spaces between these are arched again from one to the other, making a solid arched ceiling. The external cornice is formed of over-sailing brick courses with a band of ornamental tiles over, and the whole finishing with that stepped battlement ornament which seems, like some other architectural features, to have been at one time common to various styles and countries, and hardly more the property of one than the other. The interior is in process of being fitted with Persian carpets and bric-à-brac, by Persian workmen, and will be a charming apartment when completed; and the whole is a very interesting specimen of pure brick architecture, and one which appears to be in accordance with the probabilities and the ascertainable facts of the architecture represented.

A group of barbarous habitations follows this last-named, for no particular reason of sequence that we can see; including a hut of timber built up on high angle posts above the ground, the intention and nationality of which are not stated; and an exceedingly interesting specimen of the early "Germain-Gaulois" dwelling, which is a circular hut of considerable size, partly sunk beneath the surface of the ground, surrounded by a breast-high wall, and with a conical thatched roof carried on large upright unhewn stones planted in the enclosure wall at regular intervals, but rising about 18 in. above the top of it, so as to leave a series of "metope" openings, a kind of clear-story, all round. The entry is by a wooden door at the bottom of external steps cut down into the ground. Following these we come to the Greek House of the time of Pericles, which is disappointing, and does not at all answer to one's idea of that dwelling. Externally it is a white stone tiled house in two blocks with a courtyard between, with a slightly projecting course as a frieze, carried by the capitals of plain pilasters which are immediately discontinued below the capital, forming only corbels; the windows, divided by square columns with moulded capitals, are filled with cross lattice work looking rather more Roman than Greek; the altar in the courtyard is Roman in its ornament; and no attempt has been made at internal decoration of the rooms with colour or in any other way. Considering what a fascinating thing might have been made of the Greek every-day house of the time of Pericles, one certainly cannot accept this mere shell as doing justice to the subject. The roof rafters projecting over the eaves are treated so as to indicate the rudimentary form of the mutules, though we should fancy that in a house of this date the ends of the rafters would have had some kind of quasi-architectural treatment even in a small house, especially as the red acroterion tiles at the end of the gables are elaborately decorative. A pretty bas-relief representing a scene in family life is fixed on the end wall.

Next follows a Roman house of the time of Augustus. This has been much better done: the interior has been elaborately decorated in the style derived from the Pompeian paintings, though the arrangement of articles of quasi-Roman bric-à-brac for sale does not add to the verisimilitude of the interior. The impluvium, it may be observed, is not correctly proportioned to the roof above, it is too small or the roof opening too large; the water, when there was any rain, would have been all over the floor, and not in the cistern. The whole ordonnance of the Roman house is not shown, only the curtains which screen the private apartments. On the exterior are painted a number of more or less amusing Latin announcements and advertisements, after the manner found so constantly in the Pompeian houses. A little garden is laid out, with its mask-head fountain at the top, and a pillar with a Janus head on each side of it.

The last house before we come to the centre space opposite the Pont d'Iena is a Gallo-Roman house of the time of Clovis, which is very well done; we have here the strange mixture of Romanesque work with Classic; round arches to windows and doors, but between some of the upper floor windows are short fluted pilasters with Ionic capitals and a piece of cornice, worked in for ornament; at the angle is the capital, entablature, and base and lower drum of the column of a Classic Corinthian order, built in as a kind of buttress, and in the end wall another Corinthian capital built aimlessly into the wall as an ornament. These Classic built-in relics have been coloured or treated so as to look older than the rest, and the whole idea of this period of architectural confusion and re-shaping is very cleverly conveyed.

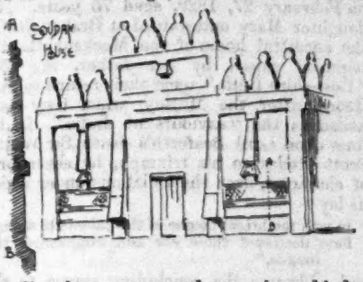
At the further side of the open space opposite the Pont d'Iena the Histoire de l'Habitation continues with an admirable reproduction of the Romanesque style of French house of the tenth century or thereabouts: the inscription is given in ancient French,—"OSTEL · ENLO · SECLE · DISME · QUANT · LIERRIS · ERET · DEL · LIGNAGE · CARLE-MAGNE." This and the next house look exactly as if they had come out of Viollet-le-Duc's *Dictionnaire* (as possibly they did). In front there is a large segmental arch forming a porch, and springing from the upper of three corbelled-out stones with great roll mouldings worked on their ends. Above is an open gallery under the roof, with a wooden balustrade in front. The windows are mostly in pairs with a shaft with Byzantine-like capital between, straight heads and decorative wall-arches over. The next house is marked, as far as one can read the studiously antiquated writing, "MESON · ENTOR · LAN · DE · GRACE · MILCCL : OV · TENS · LE · SAINT · ROI · LOOYS." This is one of those highly characteristic early Gothic fronts, with a pointed arch in very solid masonry below enclosing the door and shuttered window of a *boutique*, with wrought-iron grilles covering the small upper lights. Above is a boldly projecting upper story in half-timber construction, carried out in a very solid manner with heavy carved timber corbels and beams with a roll moulding. This front, which seems to have been done *con amore*, is carried out with a solidity highly creditable for a temporary model. There is none of your coloured canvas work here, showing the stone walls flapping about in the wind, but good solid genuine masonry.

Next to these is a small early French Renaissance building, "HOSTEL · DU · XII · SIECLE," a charming little building, with all the main characteristics of the style duly shown—mullioned windows, panelled pilasters, &c. This has been made a dépôt of Venetian glass, on the ground stated in an inscription over the gateway leading to the courtyard behind: "APPELÉS · EN · FRANCE · PAR · LE · NOBLE · ROY · HENRI II. · LES · MAISTRES · VERRIERS · VÉNITIENS · SE · SONT · ETABLIS · ICY · AFIN · DY · EXERCER · LEUR · ART · ET · D'EN · FAIRE · CONNAISTRE · LES · PROCÉDÉS." Behind the house is a glass-forge where Venetian workmen are engaged in their craft, and the process of turning out their ornamental blown and twisted glass can be seen in operation.

The chronological order seems to be entirely broken here, as the next exhibit is a Byzantine house of the time of Justinian. This is also a very interesting erection, carried out in a very solid manner. It shows two open galleries in front, the ground-floor with a range of square pilasters with plain moulded capitals of nearly Classic type; the gallery or loggia above has three cylindrical columns, the side ones with Ionic capitals with a circle and an emblem in the centre, the middle one showing one of the Byzantine modifications of Corinthian foliage: all the columns are short in proportion and have tremendous necking mouldings. A solid balustrade runs between the columns, panelled in various shapes, the panels being decorated in an irregular manner with emblems and ornaments and inscriptions. Over the whole opening of the loggia extends a Brobdingnagian label moulding twisting round into a great circle at the two extremities. Altogether this is what may be called a very amusing erection, with a great deal of architectural history suggested in a small space.

This is followed by a Russian country-house, with a heavy rough stone plinth, on which are rough-cast white walls with heavy angle-pieces of timber, shaped into a kind of baluster outline. The upper story is entirely of wood, with ogee arches executed in planking, and a horse-shoe pointed gable filled up with similar planking: the loggia is gay with many-coloured curtains. A "Maison Arabe vers le XIe Siécle" follows, a white erection with a horse-shoe arch door, the spandrels gay with coloured tiles, and the over-hanging eaves brightly coloured. Whether it is on account of the recurrence of the horse-shoe

arch in both, that this is placed next the Russian house, we cannot say: but if so, this is certainly putting accidentals before essentials. Behind this is an interesting barbaric-looking white front—"Maison Mahométane au Soudan"; date not given; perhaps not known. It is a most peculiar affair, with rude pilasters hung on to the walls, so to speak, battering outward but cut off short before they reach the ground or the plinth, almost as absurdly as in a modern Queen Anne house; the roof finish is made by a series of great finial affairs two or three feet high, as shown on the sketch,



standing in a row on the cornice, a kind of ornament which hardly seems worth the trouble and labour of producing on this scale. The Chinese and Japanese pavilions which follow present the well-known characteristics of these gimcrack erections, which have in fact no more place in relation to architectural history, properly so called, than a child's house of cards.

Beyond these we come again to structures of a barbarous class, chiefly from Africa; but it is unfortunate that few of these models are provided with any label to show the designers' intention, which can only be conjectured. As in the case of the lake dwellings, one is reminded here how much the form of early and uncivilised dwellings has been influenced by the desire to get out of the way of danger of intrusion. The remarkable form shown in the sketch subjoined seems apparently intended for provision either against floods or vermin,—it is too low to be intended for a fortification against human enemies. The basement is a stone or concrete mass in the model; how it is made by those who are said to live in a hut of that build we are not told. We presume it is what would be called a mud hut; the roof is a thatch. Near this is an example with a double circle of rough posts supporting a platform of boughs, with a plaster domical erection standing on the platform over the inner circle of posts. It is curious to see here how very nearly we have, in its essential lines, the idea of a Roman circular temple with a colonnade round and a dome above. Another fane is that with a double "colonnade" but with the inner colonnade closed up with plaster walls in the ground story, and a conical thatched roof over all. The sections of these two are appended. Apparently the idea has been to

keep together at this end of the ground the forms of barbarous dwellings which are circular on plan. We have here the circular hut of boughs brought together at the top to a point, as at the other end of the exhibits we have the same form of construction brought together into a ridge.

The collection concludes with houses of the "Aztecs" and the Incas, of the latter of which a sketch is given in the lithograph. The Aztec house, as represented at Paris, is obviously a stone form of an original wooden construction, showing brackets in the shape and proportions of timber projecting far out from the walls, as in the Lycian tombs, and with the ends cut with rudely incised ornaments. The model reminds one also of the influence of similar conditions in producing similar effects, inasmuch as the large reeded wall ornament of the Assyrians, so obviously the record of a previous timber construction in which unsquared trunks of trees were employed, is found here again. The Incas' house is much more masonic in character, and partaking to a remarkable extent of the characteristics of Egyptian architecture, in its massiveness, its heavy cornice, and its doors with sloping jambs, and with an architrave finish which looks like the section of the characteristic Egyptian cavetto moulding turned flat against the wall, and used as an ornament in low relief.

There appears to have been some intended significance in placing the Aztec house in the vicinity of the Chinese and Japanese buildings, as the curved-out scythe-like finials of the horizontal beams in the Aztec house look very much like the execution in stone of the same type of work as that which the Chinese and Japanese for so many centuries went on executing in wood. The localities are far enough apart; the influences seem to have been similar. The Chinese and Japanese never got beyond the wooden construction which the Lycians and the Aztecs petrified into stone, in its original shapes, and which the Greeks evolved into a style bearing little or no direct preservation of its partially wooden original.

The collection of models on the Quai d'Orsay, though arranged without much regard to method or sequence, suggests a good many such comparisons, and would be of more general interest and utility to the public if some kind of guide or catalogue *raisonnée* to it were put into the hands of visitors, pointing out the historical and geographical relations of the various styles of building exemplified. As it is, it may be said that the collection is a little too much for the general visitor, and not sufficient for the architectural student.

NOTES.

AS it appears that the Government have undertaken to provide space for future extension of the National Gallery in the barrack-yard (according to a statement made by the First Commissioner of Works on Monday last), we do not see that there is any valid objection to the selection of the site at the back of the National Gallery for the new building for the National Portrait Gallery; a selection which we may now probably regard as definitely determined. The site is a central one, and certainly far more suitable than the scheme which was proposed and supported in various quarters of having a building at Kensington. We hope the Government promise as to providing space for the extension of the National Gallery (certain to be required sooner or later) is a *bonâ-fide* one, and as the law of the Medes and Persians which altereth not: and if that is so, the choice has a good deal to recommend it. The new building is to be entrusted to Mr. Ewan Christian, in consultation with Mr. Geo. Scharff, so that there is every reason to believe that the result will be satisfactory in an architectural and practical sense.

IT is probable that the introduction of Mr. Balfour's Bill for the creation of light railways in Ireland will direct attention, or at any rate the attention of investors, to the existing Irish railways. At the present time Irish railway stocks are generally at a much lower level of value, having regard to their rate of dividend, than are English railways. Considering the circumstances of Ireland, it is natural there should be some difference between the value of English and Irish railway stocks, but there can, we think, be no question that the difference is too great, even preference stocks, which should not be affected in the same way as ordinary stocks, appearing to disadvantage by the side of English preference stocks. It would be impossible to go into details, but we may take, as one instance, the Cork and Bandon line, which pays a higher dividend on its ordinary shares than the Metropolitan, but which stands only at 76, whereas the Metropolitan is at 90. Considering the way in which the British public entrusts its moneys to companies in the most distant parts of the world, it is much to be regretted that it does not obtain sound investments in Irish railways, which would return a fair rate of interest, for the investment of British capital in existing Irish companies would stimulate further commercial enterprises in that country. It is also to be noted in regard to Irish railways that throughout the present year there has been a steady increase in their traffic receipts.

THE Comptroller-General of Patents has published his report for the year 1888, being the sixth annual report under the present *régime*, whereby the Patent Office forms a department of the Board of Trade. We find that during the five years which ended with December 31 last the applications for patents advanced,—and since 1885 by a fairly constant rate of progression,—from 17,110 to 19,103; those for trade-marks to nearly double the total of 7,104 in the year 1884; whilst the designs have risen to nearly 150 per cent. of the 19,753 for that same year. Of the applications for patents for the twelve months under review, 79 per cent. were deposited by residents within the United Kingdom, and about 8 per cent. by residents in North and South America. The greater portion of the remainder were received from Germany and France. The course of procedure has been often modified by statute of late years. The Amendment Act, which came into force on January 1 last, provides for, *inter alia*, the refusal of informal, as well as for the post-dating of amended, applications; the acceptance of identical—or, at any rate, similar—titles without notice being given to the different parties likely to be affected thereby; and for the opposition to any grant upon the grounds either that the complete and provisional specifications describe or claim inventions which are not identical, or that the opponent has lodged, in the interval, an application for an invention which agrees with that which is covered by the other side's complete and, in in the conflict contemplated, different specification.

WITHIN a few days will be opened a register of duly authorised "patent-agents,"—a body that would appear to conduct for the public nearly three-fourths of the applications whereunder patents, designs, &c., are sought. The Board have framed a code of rules, under section 2 of the Patents, Designs, and Trade-Marks Act of last year, for the establishment of a register of "agents for obtaining patents in the United Kingdom." It is enacted that after July 1 next no one will be entitled to assume the style or description of patent-agent who is not registered under that Act,—existing rights are guarded by a proviso that every person who satisfies the Board, by a statutory declaration or otherwise, that he had been *bonâ-fide* practising as a patent-agent prior to the passing of the Act on December 24 last, may claim to be so registered. For wittingly contravening this regulation, an offender becomes liable, on summary conviction, to a fine not exceeding 20*l*. The keeping of this register is committed to the Institute of Patent-Agents, who are empowered to frame a scheme for the examination in professional knowledge and skill of such candidates as do not come within the retrospective clause of the statute. For that examination certain previous qualifications are required. It will be open to all who have matriculated at any university in Great Britain and Ireland, or have taken certificates in the Oxford and Cambridge Middle Class Senior Local Examinations, or have passed any examination for admission

into our Civil Service. This final examination by the Council of the Institute, will further be open to any solicitor in England or Ireland, any law agent practising before the Scots Court of Session, and to any one who has served for not less than seven consecutive years as pupil or assistant to one or more registered patent-agents. The registration-fee is fixed at five guineas, and an annual fee of three guineas is payable in addition. An entrance-fee of two guineas will be charged to each candidate for the final examination. The Council are required to print copies of the Register at stated times, to make periodical reports of its contents, and to arrange for an appeal to the Board by any patent-agent who may feel aggrieved by their action in connexion therewith.

MR. JEFFERDS, C.E., is still pressing upon the attention of the British public his suggestions as to rolling-stock reform on our railways. He complains that our officials "cling with death-like tenacity to the ways of our forefathers," and has now addressed a circular letter to the Chairmen of Chambers of Commerce, endeavouring to arouse them to a sense of the loss resulting to the community from this conservatism. We need not repeat Mr. Jefferds's arguments as to the superiority of the large American "bogie" freight-cars, as they are now tolerably familiar,—as, indeed, are the cars themselves to many railway officials and others. Those that were on view at St. Pancras a year or so back, when we referred to the matter, were not, it appears, for use on the Midland line, but were put together there prior to being sent down to Barrow for the Furness Railway Company. There is no doubt that the employment of these cars for heavy loads would materially reduce the amount of dead-weight requiring to be hauled, but a large proportion of our traffic (urgent and perishable goods) is necessarily sent in quantities for which even our present type of truck is really too large. Mr. Jefferds estimates the proportion of such traffic to be only 28 per cent. of the total, and concludes his remarks with a very practical one. He offers to build in England, and lease to the companies, all the freight rolling-stock they require at a daily rental of 2s. each car. For our ordinary trucks,—which are only one-fourth of the carrying capacity of the American type,—the usual charge for demurrage is 3s. per day, so that the proposal appears to be worth consideration. Another scheme for reducing the expenses in this department of railway work is suggested from another quarter,—by means of amalgamation of rolling-stock. We allude to a suggestion made by Mr. C. F. Clarke, of Wolverhampton, for the establishment of a "Universal Rolling-stock Company," to which each railway company should transfer all its trucks in exchange for a proportionate share in the capital. This would probably be economical (if workable), and it is evident that the positive loss entailed by non-paying stock,—in the shape of idle trucks and superfluous dead-weight,—is being increasingly recognised, and that the question is one with which our railway managers will soon feel compelled to deal.

THE position and condition of water-supply reservoirs in this country have at no time attracted more critical attention than they are now receiving owing to the recent dreadful disaster in Pennsylvania, and works at the present time in progress are naturally examined more closely than they would have been. Glasgow's scheme for the extension of its Loch Katrine supply, as an instance in point (already mentioned in the *Builder*) includes the raising of the loch level several feet higher by additional dam works, and the formation of a second service-reservoir a short distance from the city. The surplus overflow of the loch finds its way now, as always, by the Teith into the Forth, and thence to the eastern sea. This is the track that any released body of surface water would take, till such time as the level fell to its old natural mark, in the event of a decisive disaster to the impounding works at the overflow weirs of the loch, and it is not easy to estimate the amount or quality of damage which would thereby accrue. The service-reservoirs, situated eight miles outside of Glasgow, and into which the tunnelled conduit from the loch leads, are purely artificial in construction, with no natural barrier; and, of course, unlike the loch in this respect, in the event of their retaining barriers giving way, the shoot of escaping water would be continuous till the dams were empty. Contiguous, yet independent of each other, they are comparatively large storages, the old reservoir, when full, containing 550 million gallons, and the new one, which is yet a long way off completion, 700 millions, and, therefore, with destructive force enough, from the elevated and commanding nature of their situation, to cause no little havoc if incontinently let loose. Half-a-mile farther down the small branch strath, a portion of whose hollow these reservoirs fill up, stands a bleaching and dyeing township of from 2,000 to 3,000 inhabitants, on the direct line to Glasgow, with below, leading to the neighbouring river Kelvin, a well-cultivated and somewhat level tract dotted with farm-buildings and cottages. The Kelvin drains the whole of the region here, passing generally southwards till it enters the Glasgow circuit, within which it finally discharges. This is the course which all the storm-waters of the district take; and from the volume brought down after heavy rains, it is easy to conceive that the sudden release of a very large storage of water in the uplands would be peculiarly destructive, the neighbouring township with adjoining mills and farmsteads being likely to come in for swift destruction, while a portion of Glasgow itself would be put in peril. The situation is certainly suggestive of a bad ending to any mishap of the Conemaugh reservoir order; but if the old works were strong above all ordinary risk before, they are sure to be made even stronger now, while the new works still in progress are bound to have bestowed on them a store of extra,—perhaps needless,—solicitude and care, which otherwise would certainly have been missed. This is an additional security; but the main security, and the best, consists in the tried skill of the engineers in charge, and in the certainty that there is no risk of a blunder being committed out of any leaning to a mad and criminal so-called economy, which is the ordinary source of disaster coming in the long run to works of this kind.

IN an article upon the forthcoming sale in Paris of M. Secrétan's collection, the *Times* mentions Sir Joshua Reynolds's "Mrs. Seyforth [*sic*] and her Daughter." This is assuredly the painting which, by some strange confusion, Reynolds entered in his pocket-book, under date Jan., 1786, as "Mrs. Seaforth and Child." Again, under date June, 1787, he writes "Mrs. Seaforth." This mistake has been commonly perpetuated—even by Bromley and other authorities; and it is high time it were set right. The portrait, painted *circa* 1786, was engraved by Joseph Grozer, of whose mezzotint (May 10, 1787) may be seen three copies in our national collection. His print is entitled "A Lady and Child." The lady in question was Mary, daughter to Baptist Proby, Dean of Lichfield. On April 22, 1782, she married Lieutenant-General Francis Humberston Mackenzie, titular Chief of Kintail, who on October 25, 1797, was created Baron Seaforth of Kintail, County Ross. Succeeding to the family estates in 1783, after reversal of the attainder, he in turn was known in his own country as "Seaforth." His kinsman, Kenneth, seventh and last Earl of Seaforth, hereditary Chief of Kintail, and of the clan Mackenneth, from amongst whom were originally raised three of our present Highland regiments,—the 71st, 72nd, and 78th,—had died in 1781, leaving an only child, Caroline, since Countess de Melfort.* Baron Seaforth died in Edinburgh on Jan. 11, 1815. In him was accomplished the dying warlock's prophecy that had long hung over the fortunes of his house. He was deaf, and in early life almost dumb; his three sons predeceased him. His daughter Mary, the child of the portrait, married Vice-Admiral Sir Samuel Hood, Bart. Having returned to Scotland from India as a widow, the "white-hooded lassie from the East" of the seers' prediction, she married the Right Honourable James Stewart who thereupon assumed the name of Mackenzie. Lady Seaforth died at Edinburgh on February 27, 1829, aged 75 years. Her daughter Mary entertained at Brahan Castle, the ancestral home of the Mackenneths, the regiment raised by her father, the 78th "Ross-shire Buffs," upon their return to Fort George after the Mutiny when they were hailed as the "saviours of India." In his lines upon Lord Seaforth's death, Sir Walter Scott alludes to his triumph, by sheer force of character, over the afflictions under which he lay—

> "In vain the bright course of thy talents to wrong,
> Fate deadened thine ear and imprisoned thy tongue."

and addresses the concluding stanza to the daughter—

> "And thou, gentle Dame, who must bear to thy grief,
> For thy clan and thy country the cares of a chief,
> Whom brief rolling moons in six changes have left;
> Of thy husband, and father, and brethren bereft;
> To thine ear of affection how sad is the hail,
> That salutes thee the heir of the line of Kintail."

* See his portrait in one of Sir Joshua's two groups, now in the National Gallery, of the Dilettanti Society.

WE noted some weeks ago that in his scheme of lectures at University College and the British Museum, Professor Poole intended to reserve the subject of Greek Archæology for the summer months, in the hope that the classes might be utilised by University students of Oxford and Cambridge. The course is now advertised. Demonstrations are to take place daily at 5 p.m. in the Museum from July 1 to 13. The course is to embrace "Sculpture, Bronzes, and Terra-cottas," by Mr. Talfourd Ely; "Coins," by the Professor himself; and "Vases and Painting" by Mr. Cecil Smith. Two introductory lectures were given last week (June 10 and 12) at University College by Prof. Poole and Mr. Talfourd Ely. The subject of Professor Poole's lecture had been announced as "The Place of Archæology in University Teaching," and probably some of the audience were disappointed that no attempt was made to fix more precisely a somewhat warmly-disputed relation. Instead, Professor Poole thought it best, and perhaps rightly, to give some general illustrations of the service archæology has rendered and may render to Classical learning, and then to review briefly each branch of the subject to be dealt with by his collaborators. Mr. Talfourd Ely's lecture on the 12th dealt with "Athens,"—a wide subject. Naturally most of it was devoted to the recent discoveries of archaic sculptures. The lecture was illustrated by lantern. We are, for popular, and even sometimes for specialist, purposes, much in favour of lantern illustrations. They have this great merit, they can be flashed up at the moment, the effect is instant, vivid, brief, therefore the more incisive. But it would be idle to deny that lantern slides have their special snare for the lecturer. He has certain effective slides, and he is tempted to show them. Surely, whatever may be thought of archæology in general, moonlight effects on the Acropolis are not matter for University teaching! Archæology is too much on its probation to venture on ground so dubious, and the Professor is, we trust, too intent on serious work to allow it.

IT is proposed to inaugurate the Scottish National Portrait Gallery in the last week of June or the first week of July, the ceremony to be performed by the Marquis of Lothian, Secretary for Scotland. The gallery occupies the west half of a characteristic, but somewhat sombre-looking, Gothic edifice erected at the east end of Queen-street, Edinburgh, from designs by Dr. Rowand Anderson, architect. The eastern half of the

building (which the country owes to the liberality of an unnamed donor) is not yet completed,—it is to be occupied by the Society of Antiquaries. The two portions are separated by a rectangular hall, which is surrounded by a double arcade, one superimposed upon the other, access to the upper arcade being obtained by flights of stairs on either side. A collection of portraits has been accumulating since 1884, and these are temporarily located in the new University buildings. This collection will be enhanced by the addition of sixteen portraits, from the National Gallery on the Mound, of Scottish celebrities, which will comprise a portrait of Kemp, the architect of the Scott Monument, by William Bonar, R.S.A., and of other celebrities, by Thomas Duncan, R.S.A.; Sir John Watson Gordon, P.R.S.A.; Colvin Smith, William Aitken, Sir David Wilkie, Sir Henry Raeburn, &c. The collection will be further enriched by a number of portraits of historical interest to be lent for the occasion.

PIETRO STROZZI, Prince of Forano, eldest son of that noble and very ancient Florentine family, has had part of the historical and marvellous palace of his ancestors repaired. Prince Strozzi has begun the works on the outward part of the palace, repairing with particular care the side looking on the "Via degli Strozzi" and the "Piazza degli Strozzi," much of the detail of which is decayed and in danger of perishing, as nobody had thought of repairing the damages wrought by time since the end of the fifteenth century. This important and delicate task was confided to an architect, Signor Pietro Berti. The halls of the palace have also been newly decorated. It must be observed that the Strozzi palace, built towards the end of the fifteenth century by Filippo Strozzi, surnamed "il Vecchio," was never completed. The second floor was hardly begun; on the first floor were left immense vaulted halls, with finely-sculptured stone doors, but otherwise bare and bereft of ornaments. The present Prince Strozzi, wishing that part of his palace, at least, should be in harmony with its exterior, has had an apartment furnished in the style and character which would have been followed by the successors of "Filippo il Vecchio" had they finished that eminent citizen's construction. The spacious hall at the top of the grand staircase has been embellished by a magnificent chimney-piece of the sixteenth century that had lain forgotten in a cellar of the palace. The reception-room, or ball-room, has been decorated with red velvet hangings and red and yellow trimmings. But what are principally admired are the windows with the stained-glass, richly painted with fantastic ornaments in the style in which Giovanni da Udine, who lived in the sixteenth century, so excelled. After this hall we find the library, which contains great book-cases in the usual sixteenth-century style. The dining-room comes next, and is the most successful of the restored rooms. The bottom of the partition walls is of a dark-yellow hue; upon it many little eagles with folded wings, and the motto, "*Expecto*," representing one of the many mottoes of the Strozzi, are seen. A large chimneypiece, sculptured in "pietra serena," together with some terra-cotta work in imitation of Della Robbia's school, ornament the room.

WE have received from the Medical Officer of the Local Government Board a batch of three reports* to the Board by inspecting medical officers as to inquiries made by them regarding the sanitary condition of places so widely removed as Macclesfield, Hatfield, and Fareham. The first report mentioned is that by Dr. Parsons on "an outbreak of scarlet-fever, with associated diphtheria and sore throat, occurring in the Macclesfield Rural and Urban Sanitary Districts in connexion with a particular supply of milk." The outbreak, it seems, occurred in the township of Upton, and the part of Macclesfield adjoining it, at the end of January last. Upton is a small place, containing only forty-one houses and 228 inhabitants. "Most of the houses are on the side next Macclesfield, forming practically a suburb continuous with the borough; they are villas inhabited by private residents and people of the middle-class who have business in the town. They are supplied with the town water, but do not drain into the town sewers, the sewage being carried into cesspools or water-courses. There are also a few farm-houses and cottages. The situation is elevated about 500 ft. above the sea-level, and the soil is sandy. The part of Macclesfield immediately adjoining Upton is of similar character, but further in the town are streets of smaller houses inhabited by artisans. It is on the side of Macclesfield towards Upton, the west side, that the scarlet-fever has mostly occurred; more distant parts, comprising the older, lower, and poorer parts of the town having almost escaped." It was found that all or almost all the patients had procured their milk from one dairyman, whose farm-house was visited by Dr. Parsons. As to its sanitary condition Dr. Parsons reports:—

"The surrounding surface and the interior of the house were, at the time of my visit, scrupulously clean. The scullery-sink pipe discharges in the open air. In the cellar in which the milk stands (when any is kept over) there is a 'sump' in the floor to catch water when the floor is washed: this was formerly connected with the drain, but the connexion is said to have been severed, and no offensive smell or current of air from the sump was discovered by me. The cellar wall was damp in the corner nearest to the privy. The privy is built against the house wall, and is entered from the wash-house; it is insufficiently ventilated, and at my visit was very offensive. The space under the seat is connected with a drain which receives also the liquid from adjoining pig-styes, and discharges into a tank about 35 yards distant, the contents of which are pumped out once a year (last in March, 1888), and distributed over the land. The water-supply of the household has, until after the outbreak, been obtained from a pump in the yard. The well is about 7 yards from the privy and pig-styes; the water had always been considered good, but at one of my visits it was turbid, with an unpleasant taste: becoming more turbid with floating particles on prolonged pumping. On analysis it was pronounced to be contaminated with sewage and unfit for drinking purposes. This water was used for rinsing the milk-cans, but (with certain exceptions) it was not drunk by the cattle, who resorted to a spring in a field, not likely to receive sewage pollution."

Although the state of things revealed in the foregoing extract is very far from that which should obtain in an ideal dairy, there seems to be some doubt whether the condition of the premises had any direct connexion with the contamination of the milk; it is possible that the mischief was done by the addition, to the general stock of milk, of that yielded by a cow which calved a few days before the outbreak, and whose milk may possibly have become infectious by reason of the development, in the puerperal condition, of some ailment so trivial or so evanescent as to have escaped notice. But the lesson of the outbreak is the old one that dairies and agencies for the distribution of milk should be under strict sanitary and veterinary supervision.

DR. R. BRUCE LOW'S inspection of and report upon the sanitary condition of Hatfield was made in consequence of the Medical Officer of Health for the Hatfield Rural Sanitary District recording, in his annual report for 1887, "an exceptional prevalence and fatality of diarrhœa" during that year in a particular part of Hatfield town. In the opinion of the Medical Officer of the district, these effects were the result (1) of absence of main-sewer ventilation; (2) absence of efficient scavenging; (3) insufficient house drainage; (4) defective slaughter-houses; and (5) existence of stables in confined spaces. But, in spite of these defects, the Local Authority expressed its "firm opinion" that the sanitary condition of its district was "fairly good." The Local Government Board was not, however, content with such soothing assurances, and told the Local Authority so. Then the matter stood until, at the end of January last, the annual report for 1888 of the Hatfield Medical Officer of Health was sent in, and was found to contain a passage as follows:—

"During the year one portion of the main sewer was found to be blocked in Hatfield in the lower part of the town; it was found to be in a very bad condition, and much out of level. In part of it the sewage remains standing, and there must be constant leakage into the subsoil. It may here be remarked that it was just in this low-lying part of the town in which there were so many infant deaths last year (1887) from diarrhœa."

On the 12th of February the Board wrote to the Local Authority again calling attention to the statements of the Medical Officer of Health, and inquiring what action was being taken in the matter of this sewer. In reply, the Local Authority wrote (on March 8) that

"Upon referring the question of the condition of the main sewer in the lower part of the town of Hatfield to their Inspector of Nuisances, he reports that he is quite satisfied with the condition of the sewer, and in his opinion no nuisance from it exists."

Thereupon the Local Government Board determined to ascertain for itself the facts of the case, and this is what Dr. Bruce Low has to report of it:—

"At the date of my visit, two of the manholes in the London-road having been opened, and a portion of the old brick sewer having been exposed, it was found that the mortar between the bricks forming the sides and crown of the sewer had here and there crumbled away, so that in many places there were openings between the bricks, and the sewer had therefore ceased to be watertight. In addition, there was found a considerable deposit of black sludge within the sewer, strongly suggestive of the gradient of the sewer being, if not irregular, at least a very poor gradient. With a view to test this, fifteen buckets of water, highly coloured with 'Venetian red,' were poured down a manhole just above where the sewer had been repaired, and it was found that twenty-five minutes elapsed before any red colour could be detected in the fluid contents of the sewer at a manhole about 100 yards lower down."

MR. SPEAR'S report upon "the prevalence of diphtheria in the Fareham Registration District, and upon the occurrence therein of enteric fever," seems to show that a certain "mixed school" had a great deal to do in disseminating the disease. Dr. Spear reports that:

"Looking at the evidence, it would seem that the disease spread in the mixed school, either by the repeated introduction there of convalescent but still infected children, or by their still infected clothing (*i.e.*, by 'fomites'), or by some continuing focus of infection attaching to the school itself. . . . .

"The two schools stand on sandy soil at one corner of Sarisbury-green, a narrow plantation and the high-road separating them. The mixed school consists of one long room divided by a partition; the whole giving floor-space equal to some 1,350 square feet, or a trifle more than 10 square feet per head, supposing the total number of children on the books were present, and a cubical capacity of some 14,400 ft. The building stands on a slope, so that a considerable space is left beneath the floor. In one part this is vacant, although enclosed, and the Inspector of Nuisances, who had examined it, reported that it was practically unventilated; dry, but permeated by an exceedingly 'musty' smell. The remainder is utilised as the kitchen and scullery of the schoolmaster's house, and until the autumn of 1887, when a new house adjoining was built for him, his sitting-room was situated here also.* An internal staircase provides direct communication between this basement and the school-room. In April, 1887, when the premises were examined by the Medical Officer of Health and inspector of nuisances, it was found that much stagnant water lay beneath the kitchen and scullery floor, and that a defective and leaky drain was likewise contaminating that space. Within some 10 ft. of this drain, moreover, the well was situated, and the water (to which it is believed the children had occasional access) was found to be polluted by soakage from the drain. These drainage defects were remedied about September, 1887, and a new house, as I have said, was built for the schoolmaster. A little earlier in the year ventilators of the 'Tobin tube' variety were inserted in the school-room (before inadequately ventilated), and the school-room was limewashed. The school privies, situated some yards from the building, are reported to have been, until June, 1887 (the third time of closing the school on account of diphtheria), exceedingly foul; and now their defects have only been partially remedied by curtailing the size of the cesspits, and by the provision of a small pipe-shaft as a ventilator. The infant school is built on level ground, and has no

*To be purchased, either directly or through a bookseller, from Eyre & Spottiswoode, London; A. and C. Black, Edinburgh; or Hodges, Figgis, & Co., Dublin.

* The schoolmaster's family consisted at that time of two adults and two older children. They do not appear to have suffered from any symptoms of diphtheria.

basement, dwelling, or drain in connexion with it. Ill-kept earth or ash closets stand, however, in very close proximity to the school-room door."

PARISIANS complain as much as visitors of the inadequacy of the public service of vehicles for getting to the Exhibition. For visitors who stay at the hotels in the central quarter of Paris we may note that there are three courses open to them for getting to the Exhibition, besides the generally exorbitant *fiacre*. One is by river steamer from the neighbourhood of the Pont Royal or thereabouts, providing an admission ticket to the Exhibition first (plenty are sold on the quais), as the landing-stage at the Exhibition lands the visitor right into it, and tickets are not sold on the boats. The second is by tram-cars which run along the quais on the north bank, and which cross the Pont d'Alma and go down the Avenue Rapp, landing the visitor at the side entrance of the Champ de Mars by the Palais des Beaux-Arts. The third route is to cross the Pont de la Concorde and enter by the gate opening into the Esplanade des Invalides, two hundred yards or so from the bridge. From here there is a miniature railway (five sous a ticket), within the precinct of the Exhibition, running to the Champ de Mars along a rather narrow track lined with polyglot warnings against putting the head or feet out on account of the close contiguity of the trees' trunks. It is an interesting philological study to note the various forms taken by the word "Attention!" which heads these printed cautions. The two most suggestive and picturesque forms are "¡Ojo!" and "Djagar baik!" but what languages these represent we did not discover.

THERE is a story of an English sailor who remarked that he should like to get to the North Pole, "if it were only to hang his hat on it, for the say-so of the thing." There does not seem to be much more than the "say-so" to be obtained from getting to the top of the Eiffel Tower, which this week has at last been thrown open to the public—as far as anything can be said to be "thrown open" with which French officialism is concerned. In this respect the management of the Eiffel Tower is only too typical of a system of public administration of which the general object seems to be to exercise every device of red-tape to delay, annoy and irritate the visitor. It costs five francs to go to the summit of the Eiffel Tower; but you cannot purchase a ticket for the summit direct—that would be making it far too simple and easy. You must pay two francs at one office for a ticket for the première étage; arrived there, you have to search, at the further extremity of the large platform crowded with restaurants, &c., for the office where you have the privilege of purchasing for one franc a ticket for the deuxième étage. Arrived there, you have to "make *queue*" for three-quarters of an hour or so to get to the ticket office where you pay two francs for the lifts for the final trip. There is a perfectly commodious and safe staircase up which any one in robust health could walk to the top in a few minutes; but this may not be used, for some unexplained reason. You may descend from the second to the first platform by a staircase, but the continuation of the same staircase, by which you would naturally and easily continue the descent, is "défense de descendre," and you have again to make an excursion amid the labyrinth of the first platform to find the staircase by which the rules permit you to descend to the ground. By dint of these ingenious arrangements it results that the best part of an afternoon is consumed in getting to the top of this precious erection and getting down again, and employment is thus found for a number of incorruptible officials of the Republic in stopping every one from employing the straight and easy way of going up and down. When arrived at the top, it will be found that the spectacle is no better or more impressive than from the second platform, in fact rather less so, and the feeling of height does not seem greater than at the second platform. The only thing to be remarked on is the loss, from this point of view, of the spread of the Tower at the base, which, owing to the perspective diminution, nearly disappears, and one seems to be looking down from the top of a nearly vertical construction. Any one, however, who gave it a thought ought to know that this would be the case; it hardly seems worth while going to the top to prove it; and that is all the visitor will get by going, except irritation and loss of time.

ARCHITECTURE AT THE ROYAL ACADEMY.—VIII.

1967. "New Buildings, University Library, Cambridge; Quad. side": Mr. J. L. Pearson, R.A. This is a block of building in late Gothic and thoroughly collegiate style, with a gateway with octagonal flanking turrets according to the *genius loci*, and windows with the heads filled with heavy and rich-looking tracery of the Perpendicular order. The new building, however, abuts most awkwardly on the Classic block at the right-hand side, which the architect seems to have treated with absolute and contemptuous indifference, and without the slightest effort to group or combine the two in any rational architectural manner. We call this a somewhat barbarous manner of making additions to a building which is worth a good deal of respect in its way, in spite of being in a style which Mr. Pearson does not care for. There is no explanation as to the purpose of the new building, which, from the arrangement and size of the windows, does not appear intended for library purposes in the usual sense.

1968. "Dining-room Decoration": Mr. Henry G. Lilley. A very neatly-executed coloured drawing of a scheme entirely commonplace both in colour and detail. Why is it hung in so honourable a position? The size of the drawing, we presume.

1969. "Café Monico: Shaftesbury-avenue Front": Messrs. Christopher & White. We gave a photo-lithograph of this drawing on June 1; the building looks better in reality than in the black-and-white drawing, owing to the fine rich tone of the terra-cotta employed, and its contrast with the granite base. It would have had much more force and character if the pavilions at the two ends had been kept nearly plain, as a stop to the richer work of the centre; to repeat the pilasters on the upper story of these wings was a great mistake. Generally speaking the building looks like what it is, and perhaps deserves to be chronicled as the best of the new Shaftesbury-avenue fronts so far; but that, unhappily, is not saying very much.

1970. "Shiplake Court on Thames": Messrs. Ernest George & Peto. We presume this is a new house, though every effort is made in the drawing to give it the appearance of an old one. The river front shows a raised balustraded terrace between the two projecting wings of the house, an arcaded porch at each end against the wing; along the terrace front the tall windows with a projecting bay mark one of the principal rooms. The courtyard front is a curious and picturesque mingling of cottage with castellated architecture, with a studiously irregular chimney breast (such as used to be a *bonne bouche* in "Harding's Sketch Books") in one place; in another a single timber and plaster gable put in as if it were an afterthought. All this,—if it is really an entirely new building, which is still open to doubt,—is of course mere playing at antiquity, but it is very well done; to adopt a criticism of President Lincoln's, "For those who like that sort of thing, it is just the sort of thing they would like." If the house is as picturesque and varied in internal arrangement as it appears externally, it should be a pleasant and entertaining one to live in; but no plan is given, and this is just the kind of house architecture which imperatively requires a plan to explain either its merits or its demerits, whichever predominate.

1972 "Black Knoll, Brockenhurst, Hants": Mr. Reginald T. Blomfield. This is a kind of bird's-eye-view on brown-toned paper of what appears to be a prettily-grouped country house and surroundings, but it is a slight drawing, and not easy to see in the position in which it is hung. Being a drawing with a very high horizon, and intended to give the effect of looking *down* on the group of buildings, it is of course, according to the usual rule in Academy hanging, placed at the very top of the line, as high above the eye as can be.

1974. "Design for figure subjects, modelled in terra-cotta, in one of the gables of the new Law Courts, Birmingham": Mr. W. Aumonier. A drawing of a gable in which three triangular spaces left by the architectural lines, one in the centre and one near the base of the gable on each side, are filled each with a figure: the symbolic meanings of the figures are not obvious, but they have the decorative merit of filling the spaces allotted to them exceedingly well, besides being vigorous and spirited in design. The upper one is a standing figure under a projecting canopy, looking forward and with the right hand resting on a shield, at her left is an Ionic capital and drum of a column, apparently as a supporter for something, it is not obvious what. On the pier dividing two decorative arches immediately beneath this figure, are sculptured the sword and scales of Justice, with a scroll bearing the word "Forward." It is not very apparent why Justice should be thus admonished; perhaps it is a suggestion of the architects' as to the necessity of a great scheme of law reform.

1975. "Reredos for St. Mary's Church, Portsea": Sir A. W. Blomfield, A.R.A. An exceedingly rich and delicate piece of modern Gothic decorative work. It consists of a large composition in (we presume) wood, divided into bays by shafts and quasi-buttresses according to the Mediæval manner, sub-divided by mullions and transom bars into richly-traceried panels, the upper ones being of open work. The outline drawing is shown on one side, and the colour treatment on the other side. The large centre compartment is occupied by a painting of the Adoration of the Magi, with richly-coloured draperies, and a gold ground, slightly broken by arabesque lines, in the upper portion. The spandrels above the picture are occupied by cherubim on a gold ground. In the panels of the side portion are figures of apostles, relieved against a gold ground in the lower portion of the panel (the heads of the figures just issuing above and breaking the line of this), while the upper portion, behind the tracery, shows a red or green ground with gold powderings. The front of the communion-table is treated with traceried panels with angel figures on gold ground. Every portion of the detail seems to have been carefully studied, and the effect of the whole is both rich and delicate.

1977. "St. John's College Oxford; east side of inner quadrangle": Mr. F. W. Troup. A measured geometrical drawing of this interesting and charming bit of English Early Renaissance work, with cross sections of the return buildings of the quad: it is rather too small in scale, however, to show properly the details of the arcade; but the author is to be thanked for providing us with a measured illustration of it.

1980. "Hall, Netley Castle": Mr. J. D. Sedding. A very well and freely executed water-colour drawing of what we presume is a new interior, as it bears the legend "J. D. Sedding, architect" on the drawing; but it looks more like a Mediæval interior a little touched-up at a later period. It is a boarded gallery with stained and polished floor, and stone walls partially wainscotted in the lower portion; large four-centred stone arches, with boldly-moulded sections, cross the openings, and the stairs are seen beyond. If this is new work, it carries us back curiously to the days of Salvin and Peckforton Castle, once the great example of modern Mediæval castle building. We thought this kind of thing had been given up. It is an interesting amusement however, for those who can afford it, and a splendid pastime for the architect.

1981. "A Toilet Set; The Mirror": Mr. W. G. B. Lewis. This is a very rich piece of decorative design for a circular mirror, the foot constructed to revolve horizontally on a circular stand, while the mirror itself is hung to swing in a circle or hoop enclosing it. The whole is gilt: the foot bearing the mirror-frame is designed somewhat like the usual form of the spreading foot or base of a Mediæval chalice, but with a double instead of a single stem, the two stems worked into the same spreading base. The back of the mirror is very richly treated, divided out into trefoil spaces filled with designs in which coloured enamel is partially introduced. A pretty feature in the design is that the mirror is smaller than the frame, leaving a little clear space all round, which is studded with red stones of some kind set projecting on the outer disc of the mirror and showing against the light between the mirror disc and the frame. The "knop," in Mediæval form, which occupies the necking of the double stems, and connects them together, is also

studded with precious stones. A defect in the design is that the gold claws which form the feet of the lower stand are too small in scale and too weak-looking to harmonise with the other details. But in general this is a rich piece of work, and the drawing (full-size) is very carefully executed.

1984. "Design for a Ceiling": Mr. Moyr Smith. This is an elaborate pen-and-ink drawing, which looks rather more like a design for the back of a book. It is carefully drawn, and contains a good deal of elaborate workmanship, but we can hardly think it merited its position. The large design which emanates from the centre and spreads over the whole ceiling to the centre of each wall is not very refined in character, and from its nature must have a tendency to lessen the scale of the room to which it is applied; and the border which it overlaps, and which is continued round in the angles of the ceiling, is of so different a style and scale that they seem to belong to two different designs.

FRENCH ART AT THE PARIS EXHIBITION.

IT is hardly possible to take any complete view of the immense collection of pictures and sculpture at the Paris Exhibition. Sculpture, besides the exhibits in the great Sculpture Hall, is scattered all about the grounds and terraces, often without name or catalogue number. The collection of paintings, large as it is, is more systematically arranged and more accessible, and as far as the French paintings are concerned it has been completely catalogued, though the difficulty of studying the collection or making any memoranda about it is much increased by the exasperating system (for it can be called no less) which the French persist in, of hanging pictures in no sequence as to the numbering, so that one has to be continually turning the leaves of the catalogue backwards and forwards for the names of works that are hung close together on the walls. With this method of hanging it is impossible to study groups of pictures according to any system, as it is impossible to tell where to find any picture that is named in the catalogue; all one can do is to make desultory notes of what is seen. It is astonishing that people who are so methodical in many ways as the French are, should be content to arrange public art exhibitions so that no one, except by the merest accident, can find anything that is named in the catalogue!

One general reflection results from the examination of the collection here, that the country of Rousseau and Dupré, Corot and Daubigny, is no longer taking an important station in landscape painting, and that in that branch, at all events, we are far ahead of France at the present moment. In the large collection there are few landscapes to be seen that are of much interest, and, as far as we saw, not one that would rank with the best works of such painters as Mr. Alfred Hunt, Mr. Henry Moore, Mr. Hook, Mr. Brett, and several others who might be named. There is a new school of French artists, the "plein air" men, who give a great look of sunshine and daylight to their scenes, but none of these are pure landscape-painters; their works are mostly large canvases in which cattle or figures, life-size, are treated in combination with a foreground landscape. In pure landscape there seems to be in French painting of to-day a curious want of the light and atmosphere of nature; and perhaps the rather extravagant protest in the contrary direction of the small band of "impressionist" landscape-painters, who seem to endeavour to paint effects of light and nothing else, may not be without its value; it is at all events calling attention to a phenomenon in nature which the average French landscape-painters of the day seem content tranquilly to pass over without notice.

Another noticeable feature in every large collection of modern French paintings is, of course, the great size of a large proportion of the canvases, as compared with what would be met with in any English collection of a similar nature. Two influences perhaps combine to lead to this frequent employment of large canvases. One, for which the French are to be envied, is the amount of direct commissions and indirect encouragement given by the State authorities towards the production of large decorative paintings for public buildings. It is true that the work produced under this encouragement has not always been of the highest type; but a great deal of fine work has been done, and there is at all events the fact remaining that in France there is the desire on the part of the Government to give liberal encouragement to art in this way—the conviction that public money so spent is well spent, followed of course by a corresponding interest in decorative art on the part of the people, who are constantly seeing it put before them; whereas in England the execution of the two decorative paintings by Sir F. Leighton at the South Kensington Museum is all we have to show in that way for many years past, and that was so rare an event that the English public hardly comprehend why such a thing is done at all, and look upon it as a kind of curiosity. In France the public are habituated to the idea that a public building is not really and worthily complete till it is decorated with high-class paintings; and of course the difference which this one fact makes in the public estimate of the value of art must be very great. In England the Government plays towards art the part of Mephistopheles: "I am that which says *no* to everything." One of the positive results of the French official encouragement of art is seen in such a work as the grand triptych* by M. Benjamin Constant, "Les Lettres," "L'Académie de Paris," and "Les Sciences," intended for the illustration of the New Sorbonne, which stretches right across one of the large rooms in the Exhibition picture galleries, and is one of the finest and most effective decorative paintings that has been executed in modern times. Another influence in France in favour of large paintings is no doubt the great size of the galleries available for the annual exhibition which answers to our Royal Academy Exhibition. Some of the pictures in the *Salon* could hardly be got into any room in the Royal Academy; at all events a very few of the size that is common enough at the Salon would go far to fill the Burlington House rooms. But at the Palais d' Industrie the wall space available is so large that size hardly counts as any obstacle to the acceptance of a work. The influence of this large field for hanging is not altogether good. In some instances, no doubt, there is a great effect of reality given by having everything the size of life. In the present year's *Salon*, for instance, there is an immense painting showing a boat taking people away from a disabled ship in a heavy sea, the spectator being on a level with the boat, while a portion of the hull of the great ship towers above him on the right. The picture is executed with a great deal of truth, and the effect of this large scale is almost as if one saw the scene itself; it seems at any rate to produce an effect which a painting on a smaller scale could not. But in a general way this spaciousness of the *Salon* seems to lead a good deal to the painting of cabinet pictures on a magnified scale, and we fear it must be added, to a good deal of coarse execution. In fact, paintings on a small scale and with delicate detail seem to be completely killed in the *Salon*.

This tendency to very large,—unnecessarily large,—painting, is fully exemplified in the collection in the Exhibition Galleries, where there are many works which occupy an amount of wall space which, to English ideas, appears quite out of proportion to the nature and treatment of the subject. This may be said of even some of the best pictures there, such as M. Duez's moonlight landscape with cattle, a scene beautiful in its simple truth of natural effect, but which might certainly have been presented with equal effect on a canvas of half the size. The same might be said of M. Roll's immense painting of "Le Travail: Chantier de Suresnes," an interesting work in many ways, partly as an example of the interest which French painters of this generation are beginning to take in the working man and his life as a subject for art; the figures of the men are characteristic and of no little interest; but the large expanse of grey colourless canvas representing nothing but earth and stones and the *débris* of a building-yard seems an unremunerative employment of pigments. The case is far otherwise with such works as the large Oriental interiors of M. Benjamin Constant, "Les Chérifas" and "La Justice du Chérif," in which the colour effect on every portion is so sumptuous and effective that the pictures are a pleasure to the eye and imagination merely as symphonies in colour: the drawback to these is rather that their intellectual interest is of so low a kind; otherwise these pictures entirely justify their scale.

M. Tattegrain is one of the most thoughtful and intellectual of the more recent French painters of the day; his pictures show always a desire to go beneath the mere superficial qualities of execution in painting,—to illustrate an idea. His "Les Deuillants" represents two or three mourners and a priest with a crucifix, who have waded waist-deep into the sea to meet those who are bringing dead bodies in from a wrecked coaster: the subject is treated with a simplicity which is more pathetic than any elaboration of grouping could be. The same painter's representation of "Les Cassolois à Merci devant Philippe le Bon," a crowd of wretched people, amid a wintry wind, half-crouching on the ground before the conqueror and his mounted troops, is another work quite out of the ordinary category of battle pictures of the kind. M. Roll, to whom we have before referred, is largely represented, partly by pictures of rustic personages treated with great insight into the type represented, as in "Manda Lametrie, Fermière," a portrait almost as simple though not as powerful as those of Lepage. He is also represented by a good portrait of M. Alphand. Among the paintings of scenes in humble life, the interest of which is a rather new discovery in French art (for Millet was quite before his time in this way), M. Renouf is good in his "Coup de Main," a child helping an old fisherman in rowing, and his "L'épave," a pathetic representation of a boy floating at sea with his arms over a spar and evidently nearly dead from exhaustion. A more poignant pathos pervades the picture by M. Deschamps, "Vu un jour de printemps,"—a wretched interior, with a dead body on a mattress, and two or three starving children, a single flower seen through the window suggesting the contrast with the life and happiness of spring. M. Humbert's "Maternité," a triptych showing a peasant mother with her two children in her arms in the centre and in the side scenes the one dead as a soldier, the other an over-worked farm-hand, is another of the class of works which owe their inspiration to Millet and Bastien-Lepage, those Carlylesque painters of popular suffering. M. Marec's "Un Lendemain de Paye" is another powerfully-painted work with a sombre moral. It may be said that the French, having neglected "les misérables" for a long time in painting, are now disposed to harrow our feelings with contrasts of the most painful description; there is something morbid in this, but it is at least not done in a commonplace manner. A more cheerful style of humble subject is M. Geoffroy's interesting work, "En Classe—Travail des Petits," a large painting of a number of children at school, highly-finished and with a great deal of special study of character in the heads. "Les Loups de Mer" (or "sea-dogs," to put it in English phrase), by Madame Demont Breton, an interior with a group of rough seafaring men, is another good work of this class.

M. Gervex, who appears to aim at the reputation of versatility, has had the good luck (if it was luck) to get all his principal works hung together at the end of one room. We have the now well-known picture of the members of the Jury at the Salon, that of Dr. Péan giving a clinical demonstration at one of the hospitals, a wonderfully clever thing, in the character and force in the head of the principal figure especially; a dressy portrait of a lady, balanced by a picture of a lady standing in a richly-furnished room with nothing on but a velvet mask over her eyes,—a picture that would send the "British matron" into hysterics with a good deal more excuse than any Royal Academy picture ever furnished; it is vulgar enough, certainly, and a poor piece of clap-trap at the best. His central work, however, a scene from De Musset's "Rolla," introduces nude painting in a very different sense, and is pathetic in sentiment as well as beautifully painted.

The painting of military subjects, for which the French have always had a predilection, could hardly be better illustrated than by M. Détaille's fine picture, "Le Rêve," the sleeping army behind its camp-fires, and the same artist's large picture of a cavalry regiment on the march, the "Cosaques d'Alaman." These are far more real than some of the enormous battle-pictures full of horses prancing in theatrical attitudes, which are duly represented in the collection, but which belong to a taste that is fortunately dying out. Of the more or less

* Illustrated in the *Builder* for Sept. 1, 1888.

idealised nude studies that always fill a considerable space in a collection of French pictures, there are some splendid examples, as far as regards execution, though few that show much of the poetic feeling which raises such works above the level of academic studies. Among the academic class may be rated all those by M. Bouguereau, and the earlier works by M. Lefebvre, such as "Diana Surprise," a class of work which, like the immense battle-pictures just alluded to, is comparatively at a discount now. In later works, such as "Psyche," M. Lefebvre has developed a really poetic treatment of nude figures, as also has M. Henner, though the most idealised works of the latter artist are not represented here. M. Benner's "Au bord de l'eau," two figures looking away from the spectator, is beautiful both in drawing and the Arcadian repose and simplicity of the composition; his "Le Repos" is also a beautiful figure, only marred by the cold green tone of the realistic landscape, which suggests a danger of rheumatism to the woman who reclines on the damp grass. The mere mastery of execution displayed in these works is, however, in itself worthy of the highest admiration; it does not raise them to the highest rank of painting, but it represents a power in the treatment of the figure which is hardly at present to be met with anywhere out of France. A comparison of these with a certain large painting of "Eve," now in the Royal Academy, is not calculated to gratify one's patriotic prejudices.

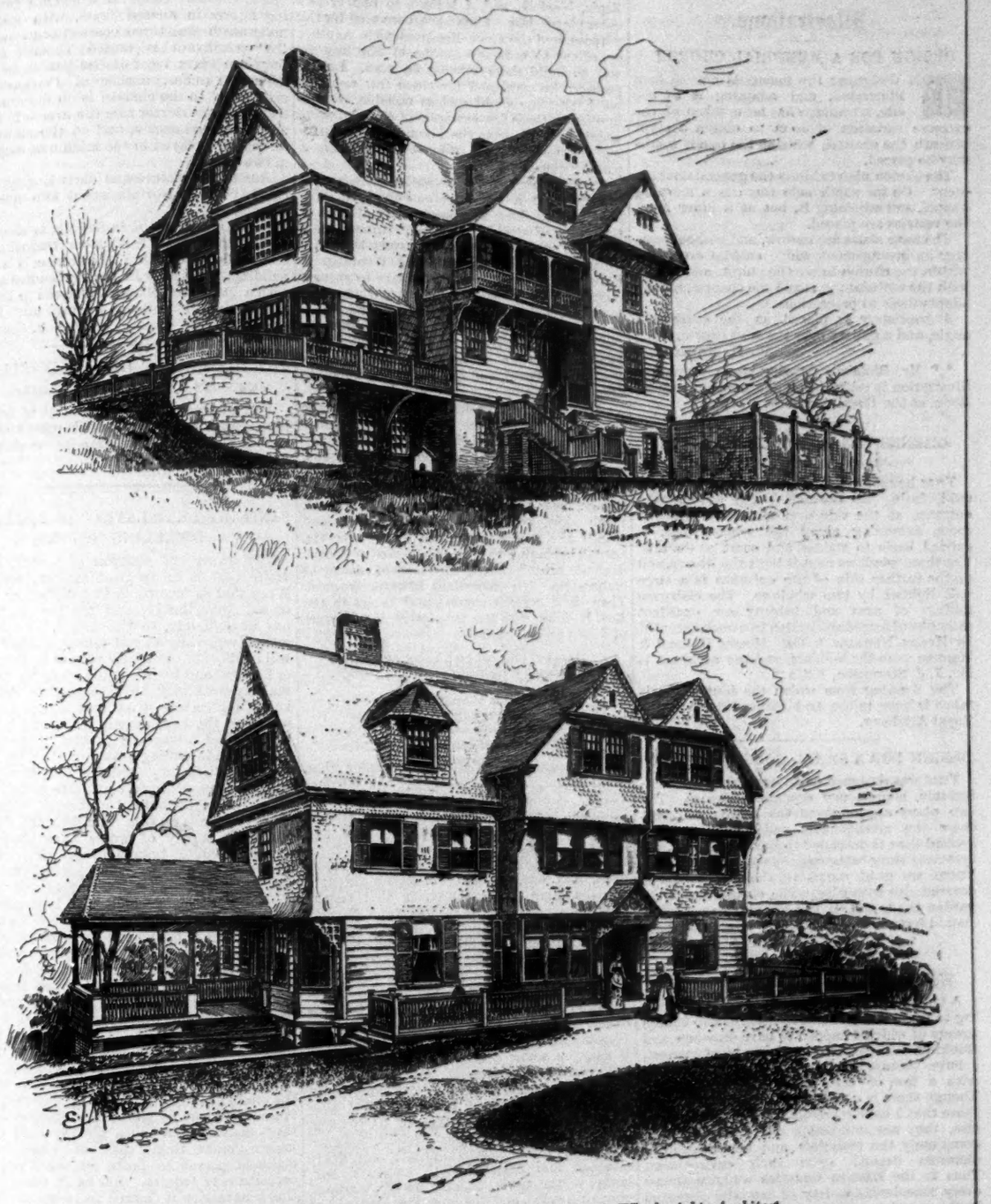
The collection contains some very fine portraits, a branch of painting in which contemporary French art takes a very high place, rather in the way of brilliantly-painted likenesses than of that kind of picture-making out of portraits, to which some able English painters are so much addicted. We see a few instances of this, however, as in M. Duez's portrait of M. Ulysse Butin, the sea painter, who is represented at his easel by the margin of the sea (which, by the way, is very badly treated), and in M. Eugène Carrière's portrait of "Louis-Henri Devillez," a large studio interior with the figure of a painter and his dog in front and in the background a model making preparations for sitting. This picture is not only one of great vigour and individuality of character in the principal figure, but is noteworthy also for a peculiar technique, a method of giving everything in a soft, rather veiled manner, with no marked definition of outline: a quality illustrated also in the same artist's large picture "Premier Voile." In strong contrast is M. Léon Comerre's brilliant realistic portrait of M. Larroumet, the present Directeur des Beaux-Arts under the Municipality, dressed in his robe of office, in which a brilliant orange is the prevailing colour, which the painter has represented in all its force though without hardness. Of similar uncompromising brilliancy is M. Agache's painting (evidently a portrait, though not called so) of a woman in a black dress seen against a background of strong red, and entitled "Enigme." M. Bonnat has a sumptuous portrait of Cardinal Lavigerie, in his state robes, which belongs to the same class of work. There are various portraits by M. Carolus-Duran, of which the finest are "Portrait de M. Z——," and the charming portrait of a young dark-haired girl seated, which was in the Academy two or three years ago, and was said to be the painter's daughter, but she appears here as "La Fille de M. Louis S——." M. Delhumeau exhibits a remarkably fine "Portrait de Mdme. Mendon," a painting of an old lady, which is more English in style and treatment than most of the portraits here, and rather recalls some by Sir John Millais. A portrait by M. F. Joseph Lagrand, of "Mdme. S——" (in Paris people whose portraits are exhibited do not seem to have that desire to advertise their names which is obvious in London) has a remarkable though rather mannered dignity about it, somewhat recalling M. Carolus-Duran.

Among figure-subjects we may call attention also to the fine work by M. Brouillet, "Le Paysan Blessé," a life-size group very finely composed, where a wounded labourer is being carried into his house; to M. J. E. Saintin's small but pathetic work, "Dernière Prière," where figures are kneeling near the door of a sick room praying for some sufferer who is not seen; M. Aublet's "Autour d'une Partition," a very good specimen of the painting of indoor every-day life, and M. Jules Garnier's interesting picture of Gambetta addressing the Chamber, under the title "Le Libérateur du Territoire," which has a certain value also as a portrait-record of the French politicians of the time represented.

In still life we see some very fine things, remarkable for a largeness of style and handling, and even of actual size, such as we never see in England in this class of subject. M. Fouace's two pictures, a "Coin d'Office" with oysters and brazen pots, &c., collected, and "Les Confitures" where a sugar-loaf and various delicacies of confectionery are given quite an artistic interest, are admirable works of their kind; so is M. Claude's "Chez la Crémière" which is perhaps even finer; and M. Quost's "Lauriers Fleuris" is a magnificent piece of flower-painting; as also M. Jeannin's "Jardinière des Fleurs." In England we do these things in rather a *petite* though highly-finished manner; the breadth and brilliancy of these French still-life works we do not seem to reach, partly because we only paint such things on a small scale. Of course it may be replied that they are not worth doing on a larger scale, and no doubt these works are only pictures *de luxe*, such as fill up the wall-space of a large mansion; but it is good to see anything first-rate of its kind. In landscape, as we have observed, it is all the other way. The painters of to-day seem to have retained something of the feeling for landscape composition which marked the school of Diaz and Dupré, but to have lost the light of day out of their pictures. Such a scene as that of Mr. Johnston's in the Royal Academy, where you feel as if you could wade in the clear pool in the centre and follow up the path leading away under the trees, seems impossible at present in France. The few pictures that show a little daylight are among the works of painters who seem to have attained a special faculty for painting certain small corners of the world, as in M. Gagliardini's bright little village street scenes, diversified in more than one case by the study of a manure heap, sometimes as a foreground object, sometimes in the middle distance. M. Binet's "La Plaine, St. Aubin-sur-Quillebeuf," is a fine composition of expanse of plain and expanse of sky, with distant woods making a slightly undulating horizon line; this is a kind of thing that the French understand the charm of as a matter of composition; but of local colour and light it is innocent. Among the few works we noted as exceptions were M. Dameron's "La Nuée qui Monte," M. Delpy's "Crépuscule après l'Orage," M. A. L. Demont's "Fiançailles," where two dimly-seen figures are looking over a twilight landscape; M. Laurens's "Châtaigniers de Marny;" M. Maillard's "Les Derniers Secours," a fine sea piece, and M. Thiollet's "Le Côte Normande," in which, however, the sea is not good. In sea painting, generally speaking, it appears to us that the French artists of the day are absolutely nowhere beside such painters as Messrs. Moore, Hook, Shaw, and Fraser, beside the best works of any one of whom a French sea hardly looks like sea at all; it has none of the salt breeze about it. In paintings in which cattle are combined with landscape, on the other hand, the French seem to retain and even surpass the traditional force and brilliancy which characterised Troyon and others in a former generation: M. Guignard's "Au Verger," a peasant with a calf, is superb; so is M. Jacques's "Le Retour du Troupeau" and M. Barillot's "Les Etangs de Saint-Paul de Varax."

The "Exposition Rétrospectif," in the central hall and two of the side galleries on the upper floor of the Beaux-Arts Section, is not an exhibition of works of deceased French artists only, but a kind of continuous exhibition from 1789 to 1889, including some of the most recent French works, though it does not appear exactly on what principle living artists have been selected to figure in this portion of the Exhibition rather than in the general Beaux-Arts collection. The study of the older works is of interest now. Paintings like Couture's large picture of "Les Romains de la Décadence" and Delacroix's "Battle of Taillebourg" seem to indicate that the French painters of that day were much more theatrical and unreal in their manner of depicting what were supposed to be historical scenes, but also much finer colourists than their successors of to-day. The French, indeed, seem to have been losing colour while we have been gaining it. The Taillebourg picture, however, admire the colour and vigour of design as we may, looks absurd in conception from to-day's point of view. Delacroix's "Liberty guiding the People" is a fine work, which only puzzles one as to whether it is or is not meant as a satire. As a battle-piece Bellange's picture of a charge of Kellerman's cuirassiers, a picture crowded with small figures, is much more like a battle than Delacroix's, and more in the modern spirit. Horace Vernet's large picture of the "Prise de Constantine," an assault by escalade, is a vigorous and energetic piece of its kind. It is sad to attend at the grave of a lost reputation, but we fear it is little better than this to look at the large, hard, academical works of Ingres, which only serve now to raise wonder at his former reputation. Louis David still shows well, as in his well-known portrait of "Mdme. Recamier" and his picture of "Galileo before the Inquisition." Regnault's splendidly energetic picture of General Prim on a black horse forms one of the most striking exhibits in the great hall; and not far from this is an exquisite little picture by Gustave Moreau, of "Galatea," a nymph seated under water, amid a perfect jewellery of coloured sea things, "rich and strange," a medley of living gems; a work which recalls some of the best achievements of our former Pre-Raphaelite school. Courbet, the painter who gained an additional fame, of a kind, as the chief inciter of the pulling down of the Vendôme column by the Communist mob, is largely represented in these galleries, by works which, though no one of them is perfect in itself, evince, when taken together, a remarkable versatility of power. Among the other deceased painters who are more or less well represented are Troyon, Baudry, Dupré, Corot, and Millet. Meissonier is represented by his well-known painting of Napoléon on the retreat from Moscow, and other smaller works; and in the first-floor gallery of the Modern Beaux-Arts Collection is to be seen his large and splendid water-colour "1807," showing one of Napoléon's cavalry regiments riding past him to make a charge; the work which was exhibited for the first time in London last year.

The crowd of sculpture in the sculpture hall, amid a good many things of mediocre interest, contains some very fine works; among them the cast of M. Maturin Moreau's grand work, "Exilés," a group of an old man of noble presence, and a nude youth standing turned towards him in sympathy. This stands not far from the entrance from Avenue Rapp, facing towards the entry, and is a thing no one should miss seeing; it is one of the few modern pieces of sculpture which reaches, in its conception, the highest intellectual interest. A general view of the sculpture gallery suggests the idea that there has been a desire to show into how many possible attitudes the nude female figure can be twisted, and many of these works are distinguished much more by a kind of supple cleverness of execution than by any higher qualities. Fine things may be picked out from among them, however; M. Hector Lemaire's "Rêve d'Amour" for instance, a woman seated and leaning back to listen to a little Cupid, is very graceful in feeling and composition. M. Delaplanche's "Circe" is a finely-modelled figure with a countenance very expressive of its intention. By M. Dalou there is a remarkably large alto-relief of the same subject as that of Delacroix's picture just referred to, the scene of Mirabeau and De Brezé. There is a great variety of character in the faces, but the Mirabeau is by no means equal in energy and originality to that of Delacroix. M. Chapu is represented by, among other things, a fine fully-draped statue of "La Peinture," heroic size, and a charming portrait-statue of a boy, "Statue du Jeune Desmarres," showing what a great sculptor can make of a portrait-statue in ordinary costume. A similar kind of success is shown by M. Laoust in his admirable figure of Lulli, the musician, as a boy, playing the violin, with face upturned with a rapt expression of enjoyment; this is one of the new works exhibited which are marked as "purchased by the State," an indication that is alone sufficient to tell us that we are not in England. M. Béguine's graceful figure called "Charmeuse," a young nude girl stooping forward and playing on two pipes, is a typical example of the peculiar kind of piquant fancy which we often meet with in French sculpture, and which is seldom seen in that of any other country at present. Another characteristic of French sculpture, not so pleasing, the taste namely for cruel and savage subjects, is in a sense well illustrated, especially by M. Fremiet's two groups, a gorilla carrying off a woman, and a man hugged by a bear,—"Ours et



Residence at Jamaica Plain, Boston, Mass., U.S.A.—Mr. E. M. Wheelwright, Architect.

homme de l'âge de pierre"; the former, which was in we think last year's *Salon*, is a wonderfully powerful work, especially in the action of the animal; but it is a kind of thing that would hardly be endured in England, nor can we think that English feeling is mistaken; the merely horrible is not the right province of art. M. Granet's "Jeunesse et le chimère," a youth bending over a Sphinx as if to ask her secret, is a fine thing, another example of that intellectual meaning of which in the best French sculpture we see more, certainly, than in our own. M. Mercié, perhaps the greatest sculptor the French possess, taking his work all round, is represented by a great patriotic group, "Quand Même," a woman snatching a musket from a wounded soldier to continue the combat; it is a striking work, but he has done finer things. Among his smaller works is a figure for a monument, "Souvenir," a woman, her features indicated as thinly veiled, reclined against a tomb; the face is singularly beautiful, and the indication of the veil, a thing which has often been done as a mere trick of handling, is in this case only so slightly indicated as to add to the quiescent expression of the figure. Among others of the higher class of works may be cited M. Peinte's "Orphée endormant Cerbère," a fine bronze work; and M. Pech's "Guido d'Arezzo," a seated figure of a monk playing on a primitive form of violoncello; the head is very fine.

By far the greater amount of the sculpture in the large hall is French, but there is a certain amount of Belgian work, including two or three fine things. Of these and the Belgian and other paintings we may give a few notes on another occasion.

RESIDENCE AT JAMAICA PLAIN, BOSTON, MASS., U.S.A.

THIS residence, built for Mr. A. Bowditch, is another, and rather larger, specimen than those we illustrated last week of some picturesque American country-houses, which, though evidently greatly influenced by English work, have really been developed from the settlers' houses of the earlier period. This origin may be traced in the weather-boarding still so largely used, and in the prevalence of broad, low roofs, as well as in many arrangements of plan. The influence of the climate is seen in the verandahs or "piazzas," and in the jalousies to nearly all windows; and the originality of American genius may be traced in the broken-up and often picturesque grouping, and in the peculiar mingling of a variety of materials and methods in the same building. Mr. Bowditch's house is described as having a brick and stone basement, a ground story faced with "moulded siding," and upper parts covered with shingles. Inside, the principal rooms, hall, and staircase are finished in hard woods, the bath-rooms in cherry, the kitchen in Georgia pine, and the rest of the house in "white wood" stained. The architect was Mr. E. M. Wheelwright, of Boston. The cost of the house amounted to 20,000 dols.

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Illustrations.

DESIGN FOR A MEMORIAL CHURCH.

IN designing the memorial church here illustrated, and adapting it to the site, advantage has been taken of the extreme variation of level to obtain a crypt beneath the chancel, wherein the family tombs may be placed.

The sketch plan exhibits the general arrangement. On the south side there is a morning chapel, and adjoining it, but at a lower level, the vestries are placed.

The nave aisles are narrow, and without seating, an arrangement which enables every one within the church to see the pulpit, and which, with the ambulatory round the chancel, readily adapts itself to processions.

A baptistery is placed at the south-west angle, and a gallery over the west doorway.

W. H. BIDLAKE.

*** Mr. Bidlake's drawing, from which the illustration is taken, is hung in the Architectural Room at the Royal Academy.

CHENESITON HOUSE, KENSINGTON COURT.

THIS house is situated on Kensington high-road, facing the Gardens. The wide arched entrance at the side, over which the drawing-room, extending along the whole front, is carried, leads to stables and court at the rear. The three windows next it light the library, and on the further side of the entrance is a large hall lighted by two windows. The elaborate railings of area and balcony are excellent examples of forged and beaten ironwork, executed by Messrs. Newman & Co. Messrs. Holland & Hannen were the builders, and the architect is Mr. J. J. Stevenson, F.S.A.

The drawing from which the illustration is taken is hung in the Architectural Room at the Royal Academy.

DESIGN FOR A SMALL COUNTRY HOUSE.

THIS was designed as an example of a comfortable, simple, and economical house. The two plans appended to the sketch will best show the arrangement and intention. The ground-floor is intended to be of red brick, the first-floor story being covered with hanging tiles. There are good rooms in the roof, which is covered also with tiles. The sketch shows the garden front, and on the ground plan a lobby should have been shown to the garden door.

PHILIP J. MARVIN.

WAYSIDE NOTES IN EAST ANGLIA.

A CORRESPONDENT of the *Builder*, in alluding to my sketches, made mention of two church towers of which I happen to have drawings, and thinking, perhaps, that they may be of interest, I have ventured to reproduce them, together with a few of their East Anglian kindred. Though there is nothing particularly striking in those that I have represented, yet, if for nothing else, they are interesting as illustrating how completely the materials and construction of churches depend upon their environment. Thus in the Eastern Counties we have almost every conceivable variety of material employed in the erection of the ecclesiastical buildings; brick where clay is abundant, as at Ingatestone, Fryerning, Layer-Marney, and many others; flint, almost universal throughout Suffolk, Norfolk, and parts of Essex; stone in the churches lying in the Thames Valley and adjacent to the river, and also in the grander and more elaborate buildings inland; and timber, as in the old church of Greenstead, Essex, one of the most curious in the county, where the walls are constructed of huge oak trees, sawn through and placed close together, framed and pinned into heads and cills, the rounded contours of the outside of the tree showing on the external face of the wall. Wood is also frequently used in Essex for the belfries, several of which are marvels of ingenuity of construction, as at Stock and Margaretting; whilst at Shenfield the arcade which separates the nave and north aisle is constructed in wood, the piers being solid trees. Brick and flint, however, are the native materials, and stone was used, generally with a sparing hand, for quoins, windows and doors, strings and enrichments. Wherever flint was employed, it was almost a necessity to construct the angles of freestone, though at Beeston Regis, Norfolk, and, I believe, in one or two other places, large flints have been used for the purpose, and the stone dispensed with. Another expedient to economise stone in flint towers, was to build them circular on plan. I may, perhaps, be pardoned for these few remarks, but I felt some slight apology was due from me in offering these few examples of church towers which, perhaps, from the absence of any striking features, do not deserve more than a passing glance.

Coming, then, to the examples delineated, I will give but a few brief notes of each. We have on the sheet a representative of each of the styles of Gothic, and one of Norman date, and here note the difference between the plain, square towers of Rawreth and Wennington, whose massive walls, unrelieved save by strings, needed no extraneous support, and the flint towers of Runton & Bramford, the large buttresses of which were rendered necessary by the unsatisfactory bond of the material employed. In the former of the last two, the turret stair is one large buttress, and has a bold and imposing effect.

Wennington.—This little parish lies on the borders of the Thames, about eighteen miles from London, in the midst of low-lying marshlands. It was called in Domesday Wentuna, also Wuntune, and Wenitun. The church, dedicated to St. Mary, stands high above the village, near the Hall, and consists of a nave, north aisle, and chancel. At the west end stands the square tower, and its architecture, though belonging to the richest period of Gothic, does not exhibit the slightest trace of carving or elaboration. The proportions, however, are good. There is a curious monumental tablet to the Rev. H. Rust, with this inscription, in a mixture of Latin and English:—

"Here lies interred both father and sonne,
For death is decreed for old and younge.
Hodie sumus
Cras erit in vili putre
Cadaver humus.
An age of cares, a world of sorrow,
Alive to-day, and dead to-morrow."

Rainham.—Two miles nearer London than Wennington, and situated in the Thames Valley, is the goodly village spelt variously Rainham, Rayneham, Reinham, and in Domesday Reneham. The land is very fertile, and the soil produces good crops. The River Ingreburne here assumes navigable proportions, and wharves line the stream throughout the place. The church is well worthy of attention, dating as it does from Norman times. It has a double dedication,—viz., to St. Helen and St. Giles,—which is, I believe, an almost unique combination. Its founder appears to be Richard de Lucy, who gave it to the Abbey of Lesnes, in Kent, which endowed a vicarage, but retained the great tithes. The Abbey had the advowson till the Dissolution, when it was granted to Cardinal Wolsey, on whose downfall it passed through the hands of numerous proprietors. The church has nave, chancel, north and south aisles, and a massive tower at the west end. We see undoubted signs of its Norman character in the massive piers dividing the nave and aisles; in the beautiful priest's door, richly moulded and enriched with chevrons, and, lastly, in the tower, with narrow slit windows, circular-headed, and the quoins constructed of Roman bricks. The parapet of the tower is much later, as is also the spirelet roof. In Edward III.'s reign there was a chantry, founded by Sir John Staunton, in the churchyard, to secure prayers for his family and Alice his wife, and also for Isabel, mother of the King. The chapel was dedicated to All Saints, but the supply of money requisite for the proper support of it coming short, it was dissolved in 1521 and converted into a free chapel, in charge of a layman, unmarried.

Rawreth.—This ancient parish, situated on the high uplands overlooking the Thames, though not mentioned in Domesday, and of which no records are extant till about 1200, was the seat of a Roman occupation, as evidenced by the coins and pottery and urns of calcined bones that were found lying in a trench in the neighbourhood. The name is variously written Raureth, Rawreth, Ragee, Rarce, Raurith, Raurere, Ragerin. The church, dedicated to St. Nicholas, which was practically rebuilt in 1823, except the tower, consists of nave, chancel, and south aisle, belonging to Beches Manor, on whom devolves the reparation. On the east wall of the south aisle is an ancient tablet to the Tyrell family, consisting of a panel, circular-headed, in which are two kneeling figures in incised brass, with inscription underneath and three coats-of-arms over. In the churchyard is buried Thomas Purchas, forty-five years vicar of the parish, related to Samuel Purchas, author of Purchas's "Pilgrimage." In the chancel is an old gravestone having on the dexter side the arms of England and France quarterly, and on the sinister side an eagle, displayed in the middle an escutcheon in two parts.

Runton is a picturesque Early English church on the coast of Norfolk, about two miles from Cromer.

Great Waldingfield, in Suffolk, is about three and a half miles N.E. from Sudbury. The church, dedicated to St. Lawrence, is a rubble building, principally in the Perpendicular style, with a Decorated chancel, restored in 1869.

Bramford I noticed in my last list of sketches.*

JOHN S. CORDER.

THE HISTORY OF HUMAN DWELLINGS: SKETCHES AT THE PARIS EXHIBITION.

FOR an account of the illustrative buildings represented in this sheet of sketches and in the similar sheet which we gave last week, see our first article this week.

SANITARY LEGISLATION IN REGARD TO DWELLING-HOUSES.

THE owner and occupier of a house equally desire that it be in good sanitary condition. When that is known, it is satisfactory to the tenant immediately, and not less so, though less immediately, to the owner. To secure a tenant, especially a good tenant, a house-owner will readily lay out a few pounds in decoration or fixtures, and he is equally ready to do what sanitary work may be necessary, providing he knows for certain what that is, and at about what cost the expense will end; and it would be a distinct advantage to him to be able to show to an intending occupier that the house is in a satisfactory sanitary condition, structurally, by producing a certificate to that effect, given by an undoubted authority. Much, of course, depends on this. The drainage of houses and their supply of water have become an almost separate branch of practice. In the Student's Column of this journal we have recently given a brief outline of the various Acts of Parliament which have been passed in behalf of the public health, so far as that is controlled or influenced by works of this character, and we would refer our readers to that Column rather than recapitulate those measures here. Let it suffice to say that legislation in this behalf has greatly altered the conditions under which houses must now be built and maintained. All the money that a man can afford to lay out on a house cannot now be devoted to external adornment, but a sufficient part of it must be laid out in making the house healthy. At present, however, there is no direct way by which the structural sanitary condition of a house already built can be known other than that of employing a qualified person to make an examination as occasion may require. But as, in many cases, this information is desired at once, this course cannot always be adopted, and, generally, it remains altogether uncertain whether a house is or is not in a satisfactory sanitary condition, structurally, having regard to its drainage, water-supply, &c.

A Bill which has been introduced into the House of Commons proposes to enact that every water-closet in a house or other building shall have a flushing service which shall be distinct and separate from every water service other than a water-closet service, and that no cistern shall be connected with any pipe which is in direct connexion with a soil-drain. Secondly, that each soil-pipe shall be ventilated, and that the open end of the ventilating-pipe shall be at least 2 ft. above the highest window or other opening on the side of the building where the pipe is situated. Thirdly, that the drains shall be ventilated by means of a soil-pipe or by a separate pipe above the highest window on the side of the building where the pipe is situated. Fourthly, that water-closets shall be trapped, and that they shall be the only arrangements inside the building having pipes directly connected with a soil-drain; and, Fifthly, that there shall be

* See *Builder*, March 23 last.

il etc.
rom Porch.

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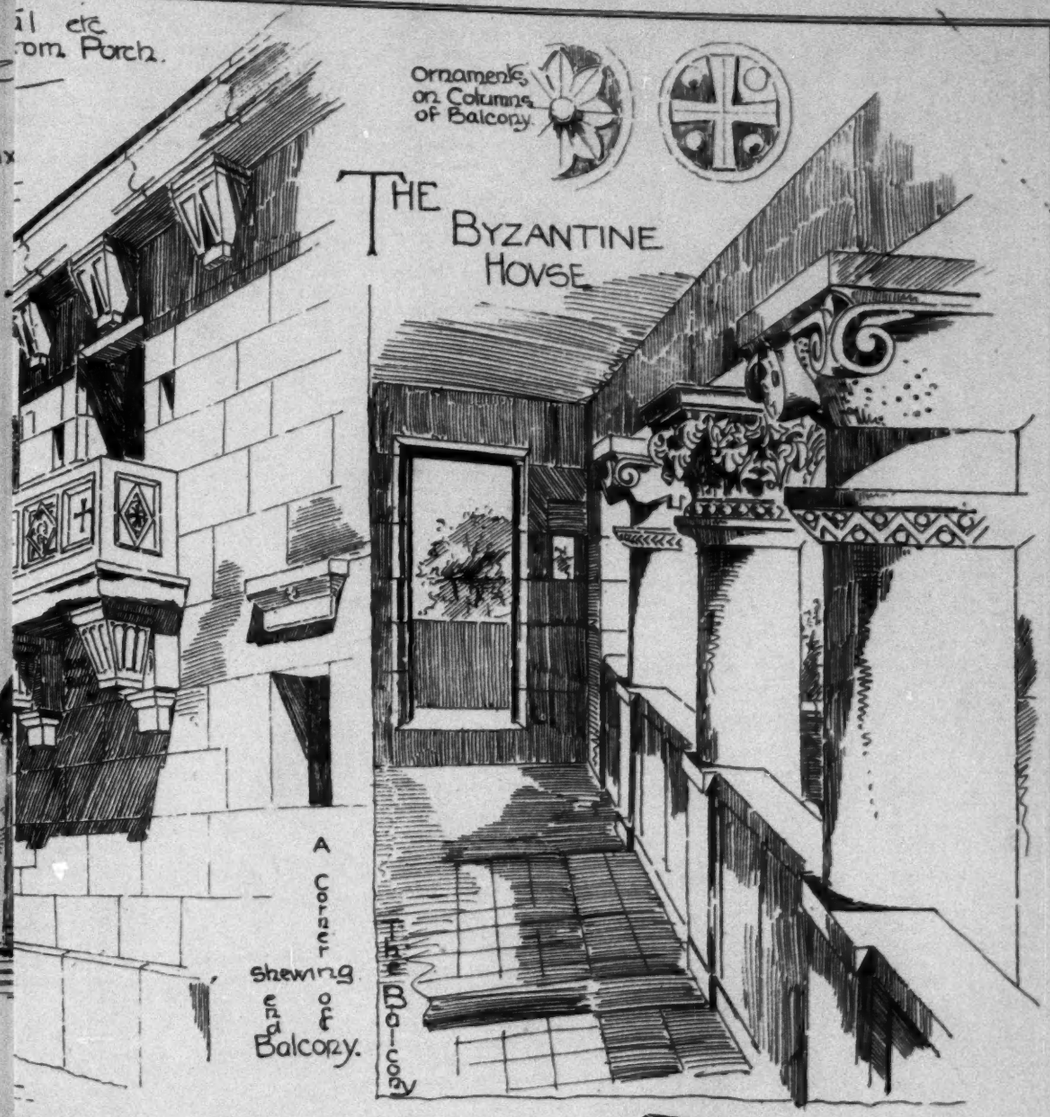
Six

Ornaments on Columns of Balcony.

THE BYZANTINE HOUSE.



A Corner shewing end of Balcony.

The Balcony

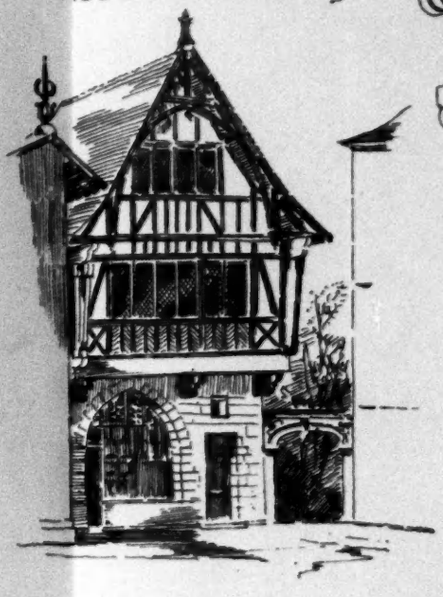
Detail of Cornice.

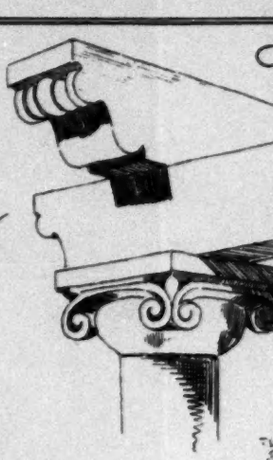
House of the Incas of Peru.

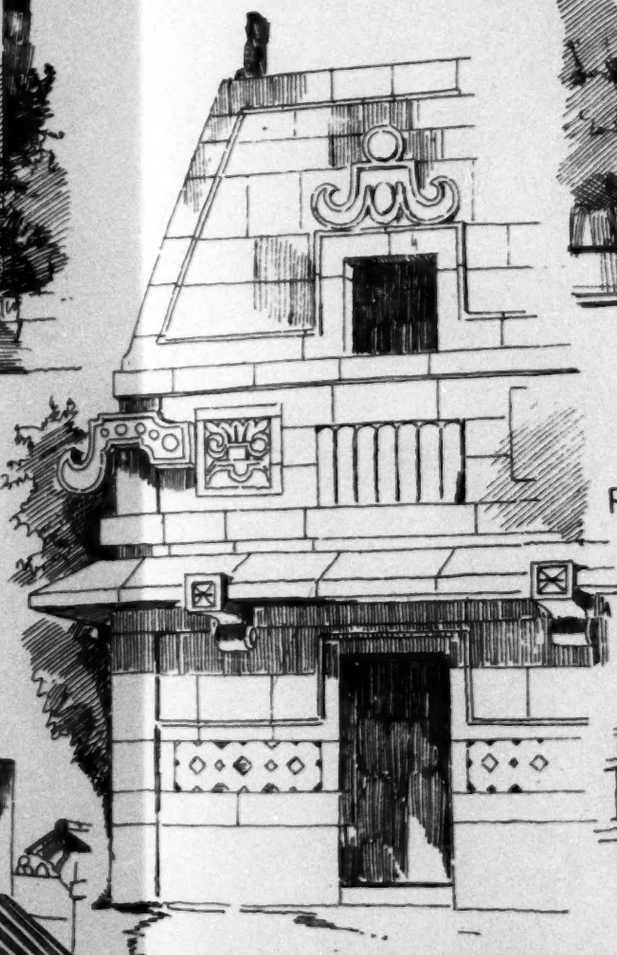
PHOTO-LITHO. SYRACUSE & CO. 33 MARTINS LANE, CANNON ST. LONDON, E.C.

Renaissance House
Sixteenth Century.

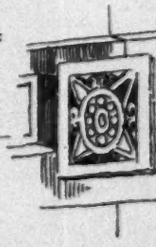
Mediæval House. – 13th Century.

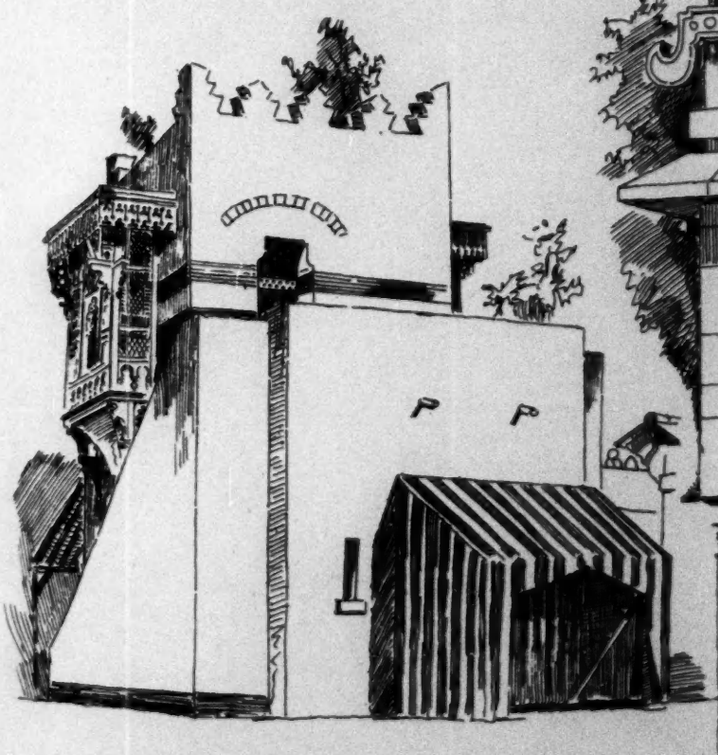






Part of Front of Mexican House.





Arab House – Eleventh Century

The Paris Exhibition Buildings illustrating the History of Human Dwelling

Capital etc from Porch.

Ornaments on Columns of Balcony

THE BYZANTINE HOUSE.

A Corner shewing end of Balcony.

The Balcony

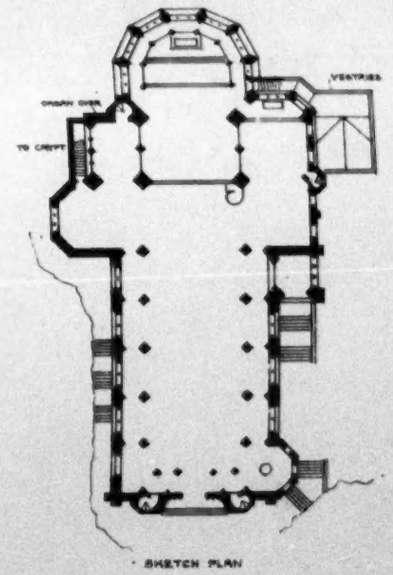
Detail of Cornice.

House of the Incas of Peru.

PHOTO LITHO. SYNAGUE & CO. 22, MARTINS LANE, CANNON ST. LONDON, E.C.

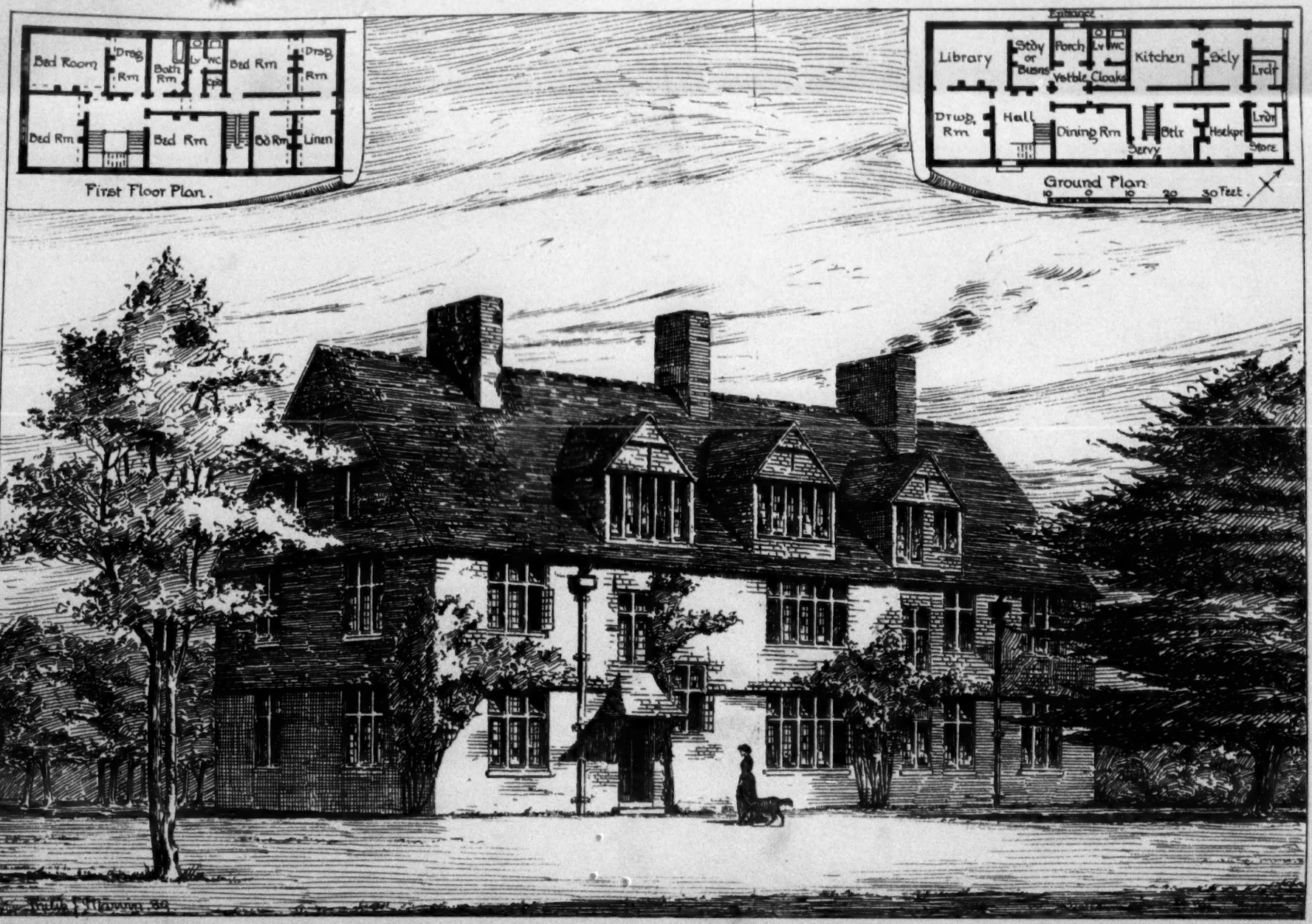
CHENESITON·HOUSE
·KENSINGTON COURT, W.
J.J. Stevenson, Archt.

PHOTO-LITHO. BIRRAGUE & CO. 62, MARTINS LANE, CANNON ST. LONDON, E.C.



SKETCH PLAN

DESIGN FOR A CHURCH.—Mr. W. H. Bidlake, M.A., Architect.



DESIGN FOR A SMALL COUNTRY HOUSE.—Mr. P. J. Marvin, Architect.

PHOTO LITHO. SPRAGUE & Co. 82, MARTINS LANE, CANNON ST. LONDON, E.C.

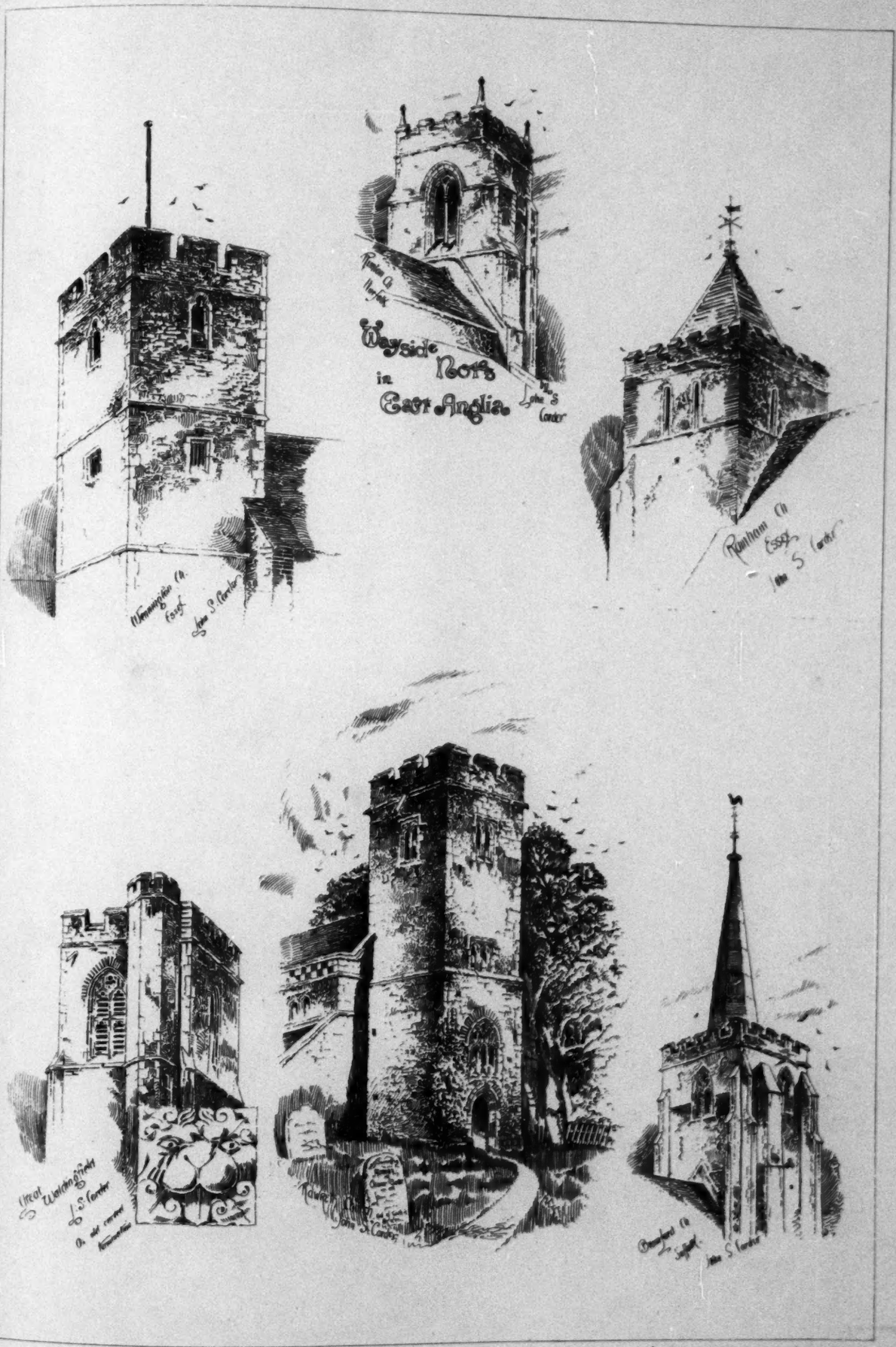


PHOTO-LITHO. SPRAGUE & Co. 62 MARTIN'S LANE CANNON ST. LONDON, E.C.

an air-chamber, with disconnecting siphon trap, or an air-inlet disconnecting siphon trap, which shall be easy of access, on the soil-drain between the building and the public sewer or cesspool. These, it will be seen, are very moderate requirements in a Bill for the "Sanitary Registration of Buildings," as it is called. None of them go beyond what is now the daily practice in such things, when they are done under any qualified instructions at all; such, for instance, as an architect would give, or an engineer acting on behalf of any local Sanitary Authority. What is new in the Bill is that where these conditions are complied with the building shall be registered,—that a sanitary certificate shall be given to its owner or occupier to the effect that its sanitary condition is satisfactory.

The Bill does not interfere specifically with the manner in which the drain itself may be laid, in respect of materials or workmanship, further than to enact that it shall not be lawful for any person or corporation to certify any building to be in satisfactory sanitary condition where the arrangements are not in conformity with the above-named requirements; with the further provision that in the case of a hospital the certificate shall take account of its lighting, warming, and ventilation, and the position of the water-closets, sinks, and discharge-pipes. The certificates are to be given only by those who are qualified in sanitary practice, which is to be known by their possession in turn of a certificate to that effect. Certain professional institutions,—namely, the Royal Institute of British Architects, the Institution of Civil Engineers, the Royal Institute of Architects in Ireland, the Association of Municipal and Sanitary Engineers and Surveyors, and the Surveyors' Institution,—are to give certificates to those of their members whom five examiners, appointed by the governing body, may declare to be qualified to design and carry out constructive sanitary works, and these institutions and associations may charge for each certificate a fee of three guineas. Those who are thus certificated will then be licensed in sanitary practice, free of charge, by the Local Government Board. Also, the Local Government Board will license, free of charge, sanitary associations whose sanitary officers have received their certificates of qualification in sanitary practice in accordance with the proposed Act; also, medical practitioners who are registered as qualified in sanitary science; also, persons who are Medical Officers of Health at the passing of the Act; also, persons who hold, at the passing of the Act, appointments as engineers or surveyors under the Public Health Acts, provided they are members,—including members and associates of every grade,—of one of the institutions above mentioned. Other persons who are, in the opinion of five examiners appointed by the Local Government Board, qualified to design and carry out constructive sanitary works, will be licensed by the Local Government Board on payment of a fee of five guineas.

The means of ensuring a properly-qualified certificate of a building being thus provided for, the owner, lessee, sub-lessee, or occupier of every building used or intended to be used as a school, college, hospital, asylum, workhouse, factory, workshop, hotel, or lodging-house, is to deposit with the sanitary registration authority a sanitary certificate, signed by a licentiate in sanitary practice, and the same applies to every building newly erected after January 1, 1892. In like manner, the owner, lessee, sub-lessee, or occupier of every building may, but without its being compulsory, claim its registration upon presenting a certificate of its satisfactory sanitary condition. The certificate of any building is to hold good for five years. It is then to be re-certified by endorsement of the old or granting of a new certificate. A lessee whose term has less than seven years to run is not affected by these provisions.

The person certifying the sanitary condition of any building is to be deemed to have examined the sanitary arrangements, and is subject to a penalty of 10*l.* on conviction before a justice of the peace of having given a false or fraudulent certificate; and any owner, lessee, sub-lessee, or occupier of a building not certified is to be liable to a penalty of 10*l.* and a running fine of 1*l.* a day during the time an uncertified building shall be let or occupied. It is provided that engineers and surveyors of local authorities shall not undertake to certify the sanitary condition of any building unless on the written request of the owner, lessee, sub-lessee, or occupier, and for such service he is to be paid by these or one of them a fee approved by the local authority, that is to say, the Corporation, Local Board of Health, or Rural Sanitary Authority, and it is these bodies who are to become the Sanitary Registration Authorities for their respective areas, towns, or districts. Each sanitary registration authority is to appoint a registrar, who may be its Clerk, or some other person, who is to issue notices to the owners and occupiers of houses and other buildings to have their sanitary condition certified, and to deposit the certificate with him previous to January 1, 1891, or, after that date, previous to the buildings being let or occupied. A list of Licentiates in Sanitary Practice is to be exhibited by the Clerk, or at a convenient place for persons desiring to procure sanitary certificates, for which apparently they will have to pay such a fee as may be agreed upon between them and the certifying persons, who perhaps, however, after a while, may agree upon a fixed scale of charges.

The fees payable by Licentiates in Sanitary Practice to the examining bodies are stated, but their own fees are left to individual agreement. This is unavoidable, because of the great variation in the time required for the due examination of different houses, not only as between large and small houses in the same town or locality, but between London houses and those of similar size in some other towns. A gentleman in sanitary practice in London was asked by a committee of an important institution how long the process of examination usually takes. The answer was that the time varies so much with the size of the house, the complication of the sanitary arrangements,—whether there is any plan or not,—and the facility of examination, that it is almost impossible to answer this question; but, to give some rough idea, the examination of an ordinary London house of moderate size might take three or four hours of his personal time, if the house had been previously prepared for his inspection by having the concealed parts exposed. If the sanitary arrangements are complicated, or if there is delay while workmen are opening down to a drain, &c., the time is largely increased. That answer seems as fair an answer as could be given, and is applicable, no doubt, to most cases, wherever situated. But there are many cases where the arrangements of drains and their accessories are of a simple character, and not at all extensive, and in these a full examination might be made in even one hour per house, if preparations for it had been previously made. Very little is required to prepare for an inspection where the drain and its attachments have been laid in the careful manner in which all new drains are, or should be, laid; but some of the old ones certainly do require an amount of labour and time to get at them which no examiner would himself give, although he would probably be required to point out, in the first instance, what is necessary to be done; in most cases, however, the work required is not more than one man can do in a day. Inasmuch as it will, in most cases, be convenient that the person employed to examine the house for certification shall first visit the place and point out what drains or other pipes need to be exposed to view, they who live in the locality will be preferred to those who would have to travel any great distance, even though they be more eminent or better known, the proceeding being, in this respect, unlike that of calling in a physician. Fashion may, perhaps, hold sway, even in such cases as these, and it may occasionally happen that a person may be sent for over the heads of those who reside nearer home; but these cases would surely be few, comparatively, and we should expect the rule to be that the advice of those practising in the locality would be found sufficient for all purposes. The Bill is promoted by some members of the medical profession, notwithstanding that, in one point of view, there is a rivalry between the preventer and the curer of disease. It was brought in by Dr. Farquharson, Dr. Cameron, Sir Henry Roscoe, and Sir Guyer Hunter, and was ordered by the House of Commons to be printed, February 22, 1889.

Rebuilding of a Swedish Town.—The greatest activity prevails in rebuilding the town of Sundsvall, in northern Sweden, totally destroyed by fire last year. Formerly the houses were of wood, but in future only brick and stone houses must be erected. Some 300 new dwellings have already been finished, at a cost of about 200,000*l.*

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS:

PRESENTATION OF THE ROYAL GOLD MEDAL.

THE concluding meeting of the present session of this Institute took place at 9, Conduit-street on Monday evening last, Mr. Alfred Waterhouse, R.A. (President), in the chair.

Obituary.

Mr. W. H. White (Sec.) announced the decease of Mr. Ralph Nicholson, Associate, and of Mr. John F. La Trobe Bateman, Hon. Associate, and Past President of the Institution of Civil Engineers.

The Paris Exhibition.

Mr. Aston Webb (Hon. Sec.), who was warmly cheered on rising for the first time since his election to office, said:—I have to announce, with the greatest pleasure, that the President, Mr. Waterhouse, has been appointed, by the British Section of the Paris Exhibition, as an International Juror in the Section of Architecture (applause). I am quite sure it will be a matter of great satisfaction to all English architects, and to the members of this Institute, that on such an important occasion English architecture will have so distinguished a representative (renewed applause). I have one further announcement to make, and that is that our Secretary, Mr. W. H. White, has also been appointed as our delegate to the Architectural Congress which is about to be held in Paris, and I believe both Mr. Waterhouse and Mr. White are about to proceed to Paris on those two missions (applause).

The Secretaryship.

The President: I have a still more important announcement to make, and that is that Mr. W. H. White has been again appointed Secretary to this Institute (applause).

The Royal Gold Medal.

The President then rose and said: You will remember that three years ago M. Garnier, the architect of the Paris Opera House, was decorated with the Queen's Gold Medal for the Promotion of Architecture, at the hands of our late lamented President. In the year following, our fellow-countryman, Mr. Ewan Christian, was the worthy recipient of the honour. Last year it was bestowed on Baron Von Hansen, of Vienna, whose age and engagements, unfortunately, did not admit of his coming to this country to receive it personally. All these recipients were practising architects, and two of them are foreigners. This year we have her Majesty's gracious permission to award this distinction to an illustrious fellow-countryman (applause), who, though not an architect, has done much as an exploring archæologist to increase our knowledge of some phases of Classical art. He has done this by enriching our already matchless collection at Bloomsbury with selected specimens of his discoveries; by his learned supervision of the Classical antiquities of the Museum; by his writings; and, lastly, by his lectures. Now, though archæology is not architecture, and though undue and excessive reverence for the works of the past may be even detrimental to the attitude of mind which the practising, originating architect ought to assume, there is no question of how much Art, for the last 2,000 years, has owed to the Greeks, and how much more it might owe with advantage if the essential refinement of this, the highest phase of art, were more studied than it is at present (applause). I therefore think we as architects owe an undoubted debt of gratitude to Sir Charles Newton for his labours as a discoverer of certain monuments of Greek art, as the exponent of their peculiarities and beauties, and as the guardian for so long a period of our great national store-house of Classical art. The main facts of Sir Charles's career are, I apprehend, well known to most here. Born in 1816, he went to Shrewsbury School, and subsequently to Christ Church, Oxford. In 1837 he took he took his B.A. degree with honours. In 1840 he graduated M.A., and in the same year was appointed one of the assistants in the Department of Antiquities in the British Museum. He remained in this post till 1852, when (at the age of thirty-six) he gave up his chance of promotion in order to devote himself to antiquarian research. With this end in view he accepted the office of Vice-Consul at Mitylene, and after some years of general exploration in the islands and on the coasts of the

Ægean, he began a series of extensive excavations, leading to discoveries which may be considered the greatest achievements of his career (applause). The Mausoleum Room at the British Museum, the arrangement of which was, I believe, his last official work at Bloomsbury, contains the cream of his labours. The period of his principal discoveries ranged from 1856 to 1859, and the scenes were chiefly Budrum (the ancient Halicarnassus), Cnidus, and Branchidæ. Though the trophies of the Mausoleum collection are mostly sculptural, the remnants of the gigantic Ionic order are of great architectural interest, from their extreme originality. Students of the minutiæ of Greek architecture will find in these fragments much that offers striking contrast to the details of Athenian work. Mausolus, the Satrap of Caria, to whose honour this vast sepulchral monument was raised, held his office from 377 to 353 B.C., and as the building was constructed by order of his widow, Artemisia the date of its commencement can be approximately assigned. Before Sir Charles Newton's time this monument was only known to modern scholars by the allusions to it in ancient writers, and if the story be true that Nicholas Hawkesmoor realised in his tower of St. George's, Bloomsbury, his interpretation of Pliny's description, it is curious that the remains of the building itself should have travelled to within a few hundred yards of that architect's work, as if to confute his misconception (laughter). Sir Charles Newton's contributions to the British Museum comprise many other valuable relics, besides those I have mentioned. The great lion which surmounted the pyramidal tomb at Cnidus, and which now rests in the Elgin Room, is of his finding, as well as a whole host of inscriptions, vases, coins, and other antiquities, some of which were purchased and others excavated. In May, 1860, Sir Charles was appointed British Consul at Rome, and in the following year, being appointed Keeper of the Greek and Roman Antiquities in the British Museum, he once more transferred his valuable services to the building within which he began his career. In 1874 he was elected Honorary Fellow of Worcester College, Oxford. In 1875 he received the well-merited honour of C.B., since advanced to K.C.B. In 1880 he became Yates Professor of Archæology at University College, London,—a post which he held at first in conjunction with the Keepership; but subsequently he gave up the latter to devote individual attention to his professorial work. Among his other distinctions are those of being a member of the Accademia dei Lincei at Rome, and of holding a chair in the University of Strasburg. He is, further, a Corresponding Member of the Institut de France, and the Antiquary to the Royal Academy. He has published an account of his travels and discoveries in the Levant, and another work on Halicarnassus, Cnidus, and Branchidæ, in collaboration with my lamented fellow-pupil, Richard Popplewell Pullan. Some of the beautiful illustrations to these works were from the hands of the late Mrs. Newton, herself a distinguished artist. His University College Lectures are also published. [Turning to the recipient of the Medal, who rose to receive it, Mr. Waterhouse continued:—It is now, Sir Charles, my duty, as President of the Royal Institute of British Architects, to hand you this proof of our appreciation of the value of your services in the cause of architecture and art generally (loud applause). It is given to you, through this Institute, by the Queen, our gracious Patroness, with her Majesty's full knowledge and approval (applause). I may add it is a great gratification to me personally, and I consider it a privilege, to have the honour of presenting the Royal Gold Medal to one so illustrious and so justly esteemed by the architects, archæologists, and scholars of this and other countries, as yourself (loud and continued applause).]

Sir Charles Newton, whose rising was the signal for renewed applause, said: — Mr. President, ladies and gentlemen,—I need not say, at the end of a long career, how unspeakably gratifying it is to me to feel that what I have done has been duly and generally appreciated (hear, hear). There is such a thing as enthusiasm going blindly on, irrespective of personal consequences (hear, hear); and many such enthusiasts do, I fear, fail; others succeed in carrying out their original purpose. Now, my original idea was to do certain things,—to discover certain unknown monuments,—and if I venture to think I have succeeded in my objects, it is enough for me. I started with blind faith. I believed that there were certain things hidden under the soil of Turkey which it was my destiny to discover. Of course, that was a perfectly irrational conviction; but I believed in it, and I found a liberal and enlightened Government, who followed out my views, and gave me really, I may say without exaggeration, everything I asked for (applause). It was that powerfully-equipped expedition that enabled me to succeed, and then came the recognition of my services by the general public, I may say not only of Englishmen but of other countries (applause). Therefore, I was content,—and more than content,—with the recognition I received at the time. Of course, when I receive this further acknowledgment of my services, it is, as it were, the compound interest of those many years of tentative excavations,—of what were to me very risky enterprises,—and I can only say in return that I have been more than gratified, and more than rewarded, for what I did. Thus much as to myself, but you will permit me, I think, to take this opportunity of urging on you that it is this Institute, more than any other public body in England, which can, if it will, promote the study of ancient Greek architecture (applause). I do not at all ask you to reproduce, as in the examples at Hyde Park Corner, the beautiful monuments of the Greeks,—to reproduce in our comparatively common stone what they finished so exquisitely in marble (hear, hear). I do not at all ask you to discard the architecture of the Middle Ages, in order to reproduce those original monuments; but I would ask you to study them (hear, hear), and I am quite sure that the more we study them the more we shall learn of the true principles of architecture (applause). The Romans, who had all this before their eyes, failed to seize the exquisite subtlety of Greek architecture, and they have left us, in the work of Vitruvius, a chaotic mass of old traditions, and abstracts of old Greek treatises, which Vitruvius himself seems to have imperfectly comprehended, but which we, after a thorough examination of the monuments still existing, will ultimately be able to decipher and appreciate. Now, in the researches of the Dilettanti Society, and also in the expedition of which I had the direction, we learnt a great deal. We began with the great work of Stuart on "Athens"; but since that time other nations have been at work, and I would particularly draw your attention to the remains of architecture which the Germans discovered at Olympia, and subsequently at Pergamon, because they filled the gap between the great architecture of the time of Pericles and the inferior servile architecture of the Roman period. Those remains tell you what was the architecture of the successors of Alexander,—of those kings who built Antiochus, Seleukeia, and other great cities, and we have now the materials for writing a history of ancient architecture such as has never been before attempted (applause). I would draw your attention to what Rickman did for Gothic architecture. He told us what were the mouldings appropriate to each period; and what we have to do, I conceive, is to see what are really the details of the architecture of what we may call the Hellenistic period. You will find these by the study of the discoveries of the Germans at Olympia and at Pergamon, and you will be assisted very materially in this work by the inscriptions found on those architectural monuments. The inscriptions at Pergamon alone amount to 800 in number. They are not yet published, but the inscriptions at Olympia are published, and I would earnestly recommend to your study, not perhaps for present gain, but for developing enlightened views on the history of architecture generally, those collections, originals or casts of which are now at Berlin. Ladies and gentlemen, I thank you heartily for this recognition of my services (applause). I can only wish I were ten years younger, because I would go again to seek for such treasures, but I am afraid the *anno Domini* tells me it is too late. Therefore I must leave to younger men, and above all to young architects sent out by this Institute, the task of carrying out this national work, which is not an English work only, but an international work, and one in which we may include the efforts made by the American School at Athens (loud applause).

Recent Advances in the Study of Architectural History.

Professor Baldwin Brown then read a paper on this subject. He began by disclaiming any idea of bringing forward facts and theories unfamiliar to the audience. The advances made from time to time in the study of the history of architecture were, he said, duly noted by members of the profession, and the works in which they were embodied were to be found in the library of the Institute. Owing, however, to the fact that many of them were in foreign tongues, they did not become readily popularised in this country, and took a long time to reach the younger student. The list of books suggested to students preparing for the examinations of the Institute contained little or nothing from which the learner would become acquainted with the present condition of knowledge on matters of architectural history. It was rather to plead for more help to the student in these branches of work that the paper had been put together. A distinction must be drawn at the outset between questions in architectural history which had mainly an archæological interest, and those which formed the basis of large views of the development of the art and its place in older civilisations. As examples of more purely archæological questions might be mentioned those concerned with the derivation of the forms of the Doric and Ionic temples, an acquaintance with which would not help to any better comprehension of Classical architecture. On the other hand, the still unsolved problem of the lighting of the Greek temple cella had a wider interest, and led us straight to the question of the essential character of the building: Was it an interior hallowed to the service of religion, with something of the solemn gloom and inviolable sanctity of the Temple at Jerusalem? or was it a brightly-illumined hall, used mainly as a museum of costly and beautiful works of art—a canopy, as Semper had called it, for the votive statue? On the practical use to the architectural student of a knowledge of the past history of the forms he had to use much might be said, but there was no need to insist on any utilitarian plea. The broad fact of the absorbing interest of the study of the development of architecture, an interest not only technical, but social, human, and even religious, was sufficient to give it a paramount claim on our attention. That the recognition of this was a tradition in the architectural profession was proved by the fact that all the great books on architectural history were written by professional architects, who had contributed more to artistic literature than all the representatives of the other arts put together. As examples of questions in architectural history which were of more than archæological importance might be noted those of the origin of Christian architecture and of the true extent and character of the influence of Byzantine art upon that of the West. It was of interest to know that the first Christian architects had original conceptions, and did not confine their efforts to adapting or copying pagan basilicas. The old traditional theory could not stand for a moment in the mind of any one who took the means now available for discovering what the pagan basilica was actually like, and how markedly it differed from the Christian meeting-place. There was also a traditional view that Byzantine influence dominated early Mediæval architecture and decorative art. The Germans had done good service in recent times by vindicating the originality and independence of the Mediæval craftsman, and leading to a reconsideration of the views maintained by MM. Viollet-le-Duc and Labarte. A question of greater importance, because of more general and wide-reaching interest, was the question of the architectural relations of the East and the West, with special reference to the origin and character of Roman architecture—the parent of our modern styles. Arched construction had generally been considered characteristically Roman, but what was actually the history of the arch at Rome? The discussion of this question was prefaced by a brief review of the history of the arch in general. After sketching the principal facts connected with the early use of the arch in Egypt, Babylonia, Assyria, Greece, and Etruria, Professor Baldwin Brown went on to argue that neither in these regions nor yet at Rome, till the age of Augustus, could we trace any use of the arch or vault as the dominating feature in monumental architecture. Except, perhaps, in the palaces of Assyrian kings, it was employed universally either in engineering works, for gateways, or for small buildings like the old Egyptian granaries. Yet it stood to reason that a long course of experiments in vault construction must have

gone on somewhere before such a work as the dome of the Pantheon, completed before 27 B.C., could have been brought to completion. Rome, before the time of Augustus, offered no field for such experiments, and we must seek elsewhere for the theatre of them. It was the merit of Gottfried Semper, in his work on "Style," to have been the first to point out that the great Hellenistic cities founded in nearer Asia by Alexander and his successors offered just the facilities required, and were, in all probability, the scene of a new movement in architecture, the influence of which passed on to the Rome of the Emperors. Seleukeia, on the Tigris, was built of the bricks from ancient Babylon; in Alexandria all the houses were vaulted; the recent exploration of Pergamon had proved that Hellenistic builders in the third and second centuries B.C. perfectly understood the use of the arch. What was more probable than that those later Greek architects, working without the traditional Hellenic materials, and in lands where a tradition of arch construction had existed from the remotest ages, worked out that use of the arch and vault on a monumental scale for which the Roman builders made themselves everlastingly famous? This question was considered by Professor Baldwin Brown on the technical side by the help of the material brought together in the works of M. Auguste Choisy, in those of Professors Durm, Adler, and others of the modern school, and he concluded by expressing a desire that some competent authorities would undertake the much-needed work of a critical edition of Vitruvius.

Professor Aitchison, A.R.A., in moving a vote of thanks to Professor Baldwin Brown for his interesting paper, said that, like the rest of the members, he had been very much struck by the profoundly interesting lecture they had had from Professor Baldwin Brown, which had come in most opportunely on the occasion of the presentation of the Royal Gold Medal to Sir Charles Newton, who had devoted an almost romantic life to discovering the remains of temples and monuments whose memory had been handed down to us from remote antiquity, and which they had only lately had the advantage of seeing in the remains he had brought to this country, and in the drawings he had published. In Sir Charles and in Professor Baldwin Brown they had two men most deeply imbued with the importance of Greek architecture, art, and civilisation. It was impossible to over-rate the value of the study of the subject, because the whole civilisation of what was termed modern life was largely owing to the Greeks (hear, hear). Although the other dumb nations of antiquity had done enormous work and aided greatly in the progress of civilisation, the aid given by them had been mostly of a material sort. Without Greek civilisation the world would have been almost without eloquence, sculpture, painting, and refined architecture. In fact, almost everything we enjoyed in the present day was owing to the Greeks. All those who had read the "Comedy of Errors" might not be aware that it was an adaptation of one of the plays of Plautus, which was adapted by Plautus from a now-lost Greek play by Menander (who was a contemporary of Alexander the Great.) Therefore we were taken back in almost two steps to the time of Alexander the Great. It was on the foundation of the Greek masterpieces of eloquence that all the subsequent eloquence of the world had been raised, and he believed he was not wrong in saying that although it had been raised on that superstructure, it had never gained in certain points of simplicity, of profundity, or of persuasiveness. A great deal of what Professor Baldwin Brown had said was most interesting from an historical and archæological point of view, but he did not know as a practising architect that the question as to whence the Romans obtained their first elements of construction was of paramount importance. It was well known that almost everything they had which was not taken from Etruria came directly from the Greeks, and the Temple of Hercules at Cora, near Velletri, looked as if it were debased Greek architecture brought directly into the Roman dominions. They knew that Pompey's Theatre was simply the copy of a Greek one at Mitylene, and there was no doubt that the answers to those questions which had so long troubled them as to where the Romans got their orders from, were to be found in the debased Greek architecture carried on from the time of Alexander. Dinocrates, the architect, who captivated Alexander by the beauty of his shape, and by acting Hercules with the lion's skin, obtained a vast amount of business from that monarch. Amongst other things, he rebuilt the Temple of Diana at Ephesus, which was simply a coarse imitation of the former one; but, no doubt, like a good many other advertising architects, he was not, perhaps, the highest man in his profession (laughter). The most interesting part of the paper was that which dealt with the Pantheon, and the domed and vaulted structures of that epoch. Any architect who had looked into what had taken place in the world must have seen that the amount of invention given to any particular age was relatively small. Any one, therefore, acquainted with the art of building, and the slow progress made in any kind of invention, would feel absolutely at one with Professor Baldwin Brown when he said that the Pantheon was not suddenly evolved. Where the idea was obtained from he knew not, but it had been probably many ages in existence in some part of the world. He thought no one could gainsay this, that if the architect did not copy something he had seen, it was the outcome of long and laborious attempts to make a large dome. Vitruvius was almost as much of an enigma as the dome of the Pantheon, and those who had studied him most were perhaps most in doubt as to what he was. Whether Vitruvius was a military engineer in the ancient sense,—a designer of engines of war,—and had merely spent his spare time in looking at the architecture, and writing a treatise upon it,—he (the speaker) did not know, but he certainly was one of the most mysterious writers whose works had come down to posterity. He knew his art theoretically, but his book was written as a sort of "handbook for the nobility and gentry" (laughter). Vitruvius described the arch as being made of wedge-shaped stones, and said that care was necessary, when an arch was turned against an outside pier, that the pier should be made thicker, or the pressure would bulge it out; but beyond that, and his mention of the Laconica with domes over them, he said very little more about the arch and the dome, although if the dates given were the right ones, those large vaults of the aqueducts must have been built long before his time. Vitruvius must also have known of the many peculiar and curious methods by which they partially got rid of centering, but he did not give the least hint of them. One of the most peculiar things about the building of those great vaults and domes was that the courses were laid horizontally, which, he believed, was still the fashion of building domes in the East. He did not know that they could say that Alexander was a Greek. He did not speak Greek except in the sense that some Englishmen spoke French; but he, no doubt, had a great number of Greeks in his army, and naturally, as Athens was the great centre of civilisation, he posed himself as a Greek, introducing the civilisation of Greece into the whole of Asia. The term *fornix* being used by Ennius for the vault of heaven was extraordinary, and showed that the Romans must have had a vault or a dome before the larger vaulting which they obtained from the Greeks was generally introduced. The Thermæ, or baths, although not so magnificent as those built in Imperial times, and even by Agrippa, must have been known to the Romans. Vitruvius used the name of *Laconicum* for the hot-air chamber, and it had probably been obtained from Sparta. Towards the end of the Roman Republic the people were busily employed cutting each other's throats, and the continual dissensions and civil wars were calculated to destroy the wealth as well as the art of the country, and were quite sufficient to account for the barrenness of its architecture in those days (applause).

Professor Kerr said he seconded the vote of thanks with much pleasure. The paper they had heard was, he considered, an exercise in the higher criticism, and ought to be looked at in that light. The time was fast disappearing when architects would criticise buildings by mere forms, and they were beginning to understand more and more, with reference to ancient architecture, that structural necessities underlay architecture, that structural necessities underlay all changes of form and style (applause). To look at all such matters in that light was the proper way, and the way in which the greatest benefit would be derived from the contemplation of the curiosities, as well as the more profoundly interesting questions, of history. The problem Professor Baldwin Brown had set them that evening seemed to be something like this: What was the origin of the very remarkable development of the arch, which had hitherto been considered to be the prerogative of the Romans, and from which the later world had derived so much? Professor Baldwin Brown seemed to have made out quite clearly that in the pre-Hellenic civilisation, there was a system of constructing houses (which had disappeared hundreds of years ago) like those described by Mr. William Simpson as still constructed in the East of mud, stones, or anything which came handy, and with domes not equilibrated scientifically, but built by rule of thumb, and which had culminated, by some process difficult to identify, in the dome of the Pantheon. That was a very important and interesting matter for inquiry, and was the critical question which he understood the lecturer to have submitted to them that evening. The Romans, having taken up the arch, as they unquestionably did, not merely as a great structural, but as a great artistic feature, it was well known what they did with it, and how it had descended to the present time. There was a very interesting question which might have been raised if time had permitted,—the question how the semi-circular arch became suddenly converted into the sharp-pointed arch. That was also a structural question, and all those matters were exceedingly interesting, because they tended to confine attention to that view of criticism which was the proper and philosophical one to take in the present time (applause).

The President, in putting the motion, said that he entirely agreed with Professor Kerr as to the absorbing interest and usefulness of the discussion of such questions as were raised by Professor Baldwin Brown's paper.

The vote of thanks was then carried by acclamation.

Professor Baldwin Brown, in replying, said he was extremely glad to find that two gentlemen of such experience and technical knowledge felt with him upon the main lines of this subject, that they must try and get at the stages through which Imperial Roman architecture came into being,—and see if it came into being at the moment. The paper on mud architecture, read by Mr. Simpson, and referred to by Professor Kerr, was one of extreme interest, as introducing them to the old traditional class of construction used in the East from time immemorial. M. Place's valuable work on Assyria showed in the same way how processes were going on all around him, which threw light upon the actual methods pursued by the constructors of the Assyrian palaces thousands of years before. Professor Aitchison had called attention to the mysterious interest attaching to Vitruvius and his writings. Well, he wished that some one would throw some light upon Vitruvius, and that Professor Aitchison would undertake a critical edition of that writer, which would be the means of bringing together what was known, in the present state of knowledge, of the technical processes in use in the ancient world (applause).

The President intimated that that meeting terminated the present Session, and said that the members would next meet on the first Monday of November.

ARCHITECTURAL ASSOCIATION VISITS.

A SOMEWHAT small party of members journeyed on Saturday last into Sussex, in order to visit the Elizabethan mansion of Parham House, a seat of the Lords de la Zouche. Starting from Victoria by an early train, the party alighted at Pulborough, which, although not the nearest point to their destination, afforded a better chance of supplying their material needs. There is, besides, much of interest in Pulborough itself. Situated on the Roman road, Stane-street, running from Regnum (Chichester) to Londinium, and apparently the location of a fortified post, numerous Roman remains have been found in the neighbourhood. The Church, well situated on the hill, and dedicated to Our Lady of the Assumption, contains some good Early English work in the chancel, and Perpendicular nave and aisles, and well repaid the visitors their labours in ascending the steep field-path leading up to it. Amongst its objects of interest, the church contains a triple sedilia of Decorated character, a fine canopied brass of Sir Thomas Harlyng, Canon of Chichester and rector of Pulborough; brasses to Edmund Mille, 1452, and his wife Matilda, which were

removed from the sepulchral chapel of the Mille family formerly standing in the churchyard; and a late Perpendicular altar-tomb of Sussex marble, which the vandalism of a later rector in 1851 appropriated for himself and his wife. There are in the parish remains of two old manor houses, the residences of the Apsley family, called Old Place and New Place, the barn of which latter is said to contain some Early English work.

After luncheon the members proceeded to Parham, their walk taking them partly through the park, in which is the famous heronry, formerly located at Penshurst. Parham House was built by Sir Thomas Palmer about 1540 A.D., and in 1597 passed to the Bisshopp family, who subsequently became the Lords de la Zouche. Though commonly called an Elizabethan mansion, the house is really an example of that interesting phase of English Renaissance preceding the grotesqueness and elaboration of the Elizabethan period, in which the refinement of the foreign Renaissance and the sobriety of the native Tudor are so happily blended. The garden fronts of Parham are charming in their dignity and regularity of façade, while the entrance-front owes its attraction to the broken-up character of its composition. The universally-pervading grey-tinted stone aids largely, of course, in maintaining the quiet dignity which is the dominant characteristic of the exterior of Parham House. Internally, successive alterations have largely impaired the antique features, though the hall, with its "screens," and the gallery, which is here 160 ft. long by 18 ft. wide and 13 ft. high, with numerous dormer bays, are still evidences of the date of the building. But if architectural features are lacking, there is in Parham that fine collection which suggested the couplet—

> "In any house, who can compare 'em,
> Those precious things that lie at Parham?"

Among these "precious things" are an almost unrivalled collection of ancient armour, including British bronze armour, both of the Anglo-Saxon period and of the "bronze age,"—anterior to the Roman occupation,—and a chronological series of Mediæval armour, especially helmets, many specimens of which, brought from the Church of St. Irene, Constantinople, were worn by the defenders of the Palæologi against the Turks in 1452. In the library are more "precious things," writings on stone and wood tablets, Egyptian papyri, Greek, Coptic, and Syriac manuscripts from the monasteries of the Levant, printed volumes from the presses of Caxton and Wynkyn de Worde, first editions of Homer, Virgil, and Shakspeare. There are also fine examples of gold and silver plate, enamels, and ivory carvings, and pictures by Ostade, Zucchero, Gainsborough, Vandyck, Raffaelle, and Titian.

Leaving Parham, the visitors made their way to Amberley Station, visiting *en route* the Church of St. Michael, Amberley,—principally Norman and Early English, the chancel arch being a fine example of Norman work. The chancel was built about 1230 by Bishop Neville, and has lately been restored. There is also a richly-moulded Decorated south doorway. On the wall of the south aisle is an excellent brass to Johannes Wantele, who died January 29, 1424, with his effigy in shirt of mail and surcoat blazoned vert, three leopards' heads argent, langued gules.

Close to the Church is the Castle, which for centuries was the residence of the bishops of Chichester. The present ruins are probably mainly the work of Bishop Rede, the benefactor of Merton College, Oxford, who, during his bishopric from 1369 to 1386, obtained a *licentia crenellare* from Edward III. The last episcopal resident was Bishop Sherburne, who died 1536.

THE BROMLEY SCHOOL BOARD COMPETITION.

WITH regard to this competition, to which we referred in a "Note" on the 1st inst., p. 407, *ante*, Mr. Charles Bell sends us the following copy of the letter of the Institute on the subject:—

> "Royal Institute of British Architects
> (Incorporated in the seventh year of William IV.),
> 9, Conduit-street, Hanover-square,
> London, W.
> June 3rd, 1889.
>
> SIR,—Your letter of the 22nd ult., addressed to the President of the Royal Institute of British Architects by direction of the School Board for Bromley (Kent), with a statement of facts and other documents relating to a recent competition for Board Schools, have been submitted to the Council of the Royal Institute for their opinion and advice, in accordance with the request of your Board. Mr. Charles Bell's design, bearing the motto 'Kent,' for the Valley School in that competition, which you were good enough to forward, was also duly submitted.
>
> The Bromley School Board having added to their statement of facts a series of three questions, to which they ask for answer, the Council of the Royal Institute, after careful consideration of the whole case, as shown in that statement and its accompanying documents, and in the design for the Valley School bearing the motto 'Kent,' have directed us to reply categorically (and in so doing we have inserted the question) as follows:—
>
> *First Question.*—Whether the action of Mr. Bell is in accordance with professional practice?
>
> *Answer.*—The spirit of the instructions to competing architects was that there should be no communication, direct or indirect, between the competitors and the Assessor. Without implying or suggesting any improper motive, it was, in the opinion of the Council, clearly inexpedient and undesirable for any competitor to have obtained the assistance of a clerk of the Assessor, and one, moreover, who is chiefly engaged in the examination of school plans in the Education Department, knowing him to be so employed.
>
> *Second Question.*—Whether, under all the circumstances, Mr. Robson's decision ought, in fairness to the other competitors, to be acted upon?
>
> *Answer.*—In the Assessor's report of March 29, 1889, he writes:—'There is a further stipulation that beyond a certain dotted line no building shall exceed 20 ft. in height. Naturally, any competitor who contravenes . . . . these conditions will be excluded.' Inasmuch as this condition was disregarded by 'Kent,' it appears to the Council that the author of that design should, in terms of the Assessor's report, be disqualified, and his decision in that respect should, in the opinion of the Council, be acted upon.
>
> *Third Question.*—What course the Council would advise the School Board to adopt, whether (a) to select any one of the designs submitted which may be in their judgment most suitable for the purpose, or (b) to start *de novo*?
>
> *Answer.*—If in the opinion of the Assessor no other design submitted for the Valley School sufficiently meets the requirements of the competition, it becomes a question whether it would not be desirable to adopt the Assessor's suggestion thus expressed in his report (before referred to) of March 29, 1889, viz.: 'I think it extremely doubtful, in view of this limitation [the stipulation referred to above], and of the fact that the school will have to be enlarged, whether a one-story school is desirable on the site. It appears to me that the boys and girls should be grouped one over the other.' In which case a fresh competition, on entirely new conditions and instructions, would be necessary.
>
> The Council have also had before them a letter from a firm of solicitors at Bromley, acting on behalf of some of the competitors in the competition referred to, also formulating questions as to the custom and practice of the architectural profession under certain circumstances. The Council have replied by stating that a communication on the subject of their letter, received from the Bromley School Board, had been under consideration and replied to; and that on making application to your Board they would probably be allowed to inspect the same.—We are, sir, your obedient servants,
>
> J. MACVICAR ANDERSON, Hon. Secretary.
> WILLIAM H. WHITE, Secretary.
>
> To the Clerk of the School Board for Bromley, Kent."

GLASGOW ARCHITECTURAL ASSOCIATION.

THE eleventh annual report of this Association, for Session 1888-9, contains the following passages:—

The following were the office-bearers for the past session:—Honorary President, Mr. Thomas Gildard; President, Mr. John Keppie; Vice-President, Mr. Alex. N. Paterson, M.A.; Hon. Secretaries, Mr. Alex. M'Gibbon, A.R.I.B.A., and Mr. William J. Devlin; Hon. Treasurer, Mr. George Tudhope; Hon. Librarian, Mr. William Fraser; Works Sub-Committee, Mr. Andrew R. Scott and Mr. R. Yates Mayor; Sketch-book Sub-Committee, Mr. Andrew N. Prentice and Mr. Charles Mackintosh; Competitions Sub-Committee, Mr. Wilson Beaton and Mr. Angus M'Auslan. Several alterations were occasioned by change of residence and resignation of membership. Mr. Devlin leaving for Ireland, Mr. William Ritchie was appointed in his stead, and Mr. Fraser leaving for London, Mr. Fred. M. Miller took his place; Mr. M'Auslan obtained an appointment at the Gold Coast, and Mr. Mayor resigned. These two vacancies in the Committee were not filled up.

The roll at the end of February shows eight honorary members and ninety-three ordinary; of these eighteen are corresponding members. There is thus a total of 101, showing a decrease of eleven upon last report, twelve having resigned, three died, and only four joined.

With regret it is recorded that the first break in the membership by death since the formation of the Association occurred during the past year,—Mr. James Salmon, F.R.I.B.A., I.A., honorary member, was the oldest practitioner in Glasgow. He twice lectured before the Association, on "Foundations" and upon "Architectural Education." The first of these was one of a course on Building Construction, given for some years consecutively, where each lecturer,—all of whom were members of the Glasgow Institute of Architects,—gave the experience of his own particular practice as supplementary to the teaching of the text-books. Mr. James Sellars, I.A., was the first Honorary President, and again in 1885 occupied the like position. Having himself been a member of the Architectural Association which existed previously in Glasgow, his name appearing in its syllabus among the essayists, he had sympathy with the work, and, as an architect in practice, was ever ready to help forward younger students from a personal experience of their difficulties. At different times he lectured before us under the following titles:—"Sanitary Arrangements," "Facts and Fiction," and "Quality, Pattern, and Price." Had he been spared he would have addressed the Association last December. His efforts were largely influential in obtaining distinctive instruction for architectural students at the School of Art; and, more recently, when President of the (Glasgow) Institute of Architects, he took great interest in the preparation of a model course of studies, now practically in operation at the Technical College. These services testify to an interest in the Association's welfare which well merit our gratitude, but more lasting than precept is the practical influence of his life as an architect; and in the long list of his works which remain with us,—not confined to one style, though in one he excelled,—lies the most eloquent incentive to diligent emulation. Mr. Matthew Gemmel, ordinary member, who died just at the completion of his apprenticeship, was connected with the Association for some years, and in the last report was honourably distinguished as the winner of the Hon. President's Prize.

There have been nine ordinary monthly meetings, at which there has been an attendance ranging from fifteen to thirty-seven. At the opening social meeting, held in the Bath Hotel, twenty-eight members and guests attended, among these latter being Mr. Hippolyte J. Blanc (President of the Edinburgh Architectural Association), Mr. T. L. Watson, F.R.I.B.A.; Mr. James Sellars, I.A.; Mr. Francis Newberry (Head Master, School of Art), and others. These representatives named expressed the utmost goodwill towards the Association.

In the syllabus of essays there was included a series of three upon one subject, thus following a precedent set the previous season with marked success. The papers were, as customary, exclusively the production of members, and were generally accompanied by drawings, specially prepared by the authors, many of considerable elaboration. The discussions which followed their delivery, opened by a member arranged upon, have perhaps been less interesting, because less taken advantage of than might be. To permit the various subjects treated of to pass without an interchange of opinion is to let slip a valuable means of mutual improvement. In order the essays were as follows:—"A Sketching Tour in Fifeshire," by Mr. John Dall; "Norman Architecture," by Mr. Alex. N. Paterson, M.A.; "Transitional Architecture," by Mr. William Kerr; "Early English Architecture," by Mr. Andrew N. Prentice; "A Tour in Italy," by Mr. William James Anderson, first "Alexander Thomson Travelling Student"; "Wrought-Iron Work," by Mr. Wilson Beaton; "Church Organs," by Mr. Larmont D. Penman; "Perspective," by Andrew R. Scott; "Jedburgh Abbey," by Mr. William Fraser; "Greek Ornament," by William M'W. Petrie; and "The Antiquities of Lanarkshire," Mr. George Tudhope.

The course of lectures has this session been reduced to four, blanks being caused by the death of Mr. Sellars; and the death of Mr. Blanc's partner, Mr. John Gordon, pre-

vented his giving the lecture on "Scottish Collegiate Churches of the Fifteenth and Sixteenth Centuries." The four delivered were:—"Recollections and Reflections," by Mr. Thomas Gildard, Hon. President; "The Art of Decoration," by Professor Baldwin Brown, M.A., Edinburgh; "Drainage," by Mr. John Honeyman, F.R.I.B.A., honorary member; and "Joinery," by Mr. R. C. Grant. These have been delivered in the rooms of the Philosophical Society, Bath-street.

Visits have been paid to several places and buildings,—to the Old Chapel at Largs and the College buildings at Cumbrae (Mr. Butterfield, architect), Newark Castle, Port-Glasgow, New Barony Church (Messrs. John Burnet, Son, & Campbell, architects), and the Forth Bridge on the autumn holiday. There has been no Association summer tour, and two of the visits set down in the syllabus were abandoned, those to Carlisle and to Bothwell Castle,—the latter owing to antiquarian operations then proceeding.

This record of the past session does not tell of unqualified success, but there is reason for congratulation that of late years it is not altogether apathy on the part of the general body of architectural assistants which prevents their attending our meetings and visits, and joining in our work, but rather the counter attractions of the various educational agencies now at work in our midst. With these we would in no wise wish to contend,—our aims are alike; but we can assure any not yet connected with us that there are benefits at the disposal of the Association which may fitly supplement the tuition of the several evening classes.

SURREY ARCHÆOLOGICAL SOCIETY:

MEETING AT WANDSWORTH.

THE members and friends of this society recently paid a visit to the old Manor House, Wandsworth, a few remarks upon which appeared in the *Builder* of the 11th ult., p. 350. Viscount Midleton, the President, occupied the chair, and said that Mr. S. W. Kershaw, who had been announced to read a paper on the history of the house, was unfortunately unable to be present; the paper would therefore be read by Mr. Mill Stephenson, Hon. Secretary. In his paper Mr. Kershaw said that Queen Anne resided at the Manor House eighteen years before she was elevated to the throne in 1702. The house was previously owned by Mr. Peter Pagin, who was buried in the adjoining cemetery of the Huguenots. As to the construction of the house, and the rumour that it was designed and erected by Sir Christopher Wren, Mr. Kershaw said he could find no documentary evidence in support of this suggestion. The house was built in the seventeenth century, no doubt after a design by Sir C. Wren. After residing here eighteen years, Queen Anne removed to Hampton Court, where, as is well known, Sir C. Wren was employed, and "she continued him" (as stated in "Wren and his Times," by Elmes) "in all his appointments." The elaborate carvings were attributed to Gibbons, and the paintings to Sir James Thornhill. In Queen Anne's boudoir was a painting of the Queen receiving a sealed letter. The house and grounds now occupy about six acres. Mr. Kershaw's paper concluded by expressing the hope that means would be found for preserving the house from demolition.

The members and visitors, consisting of a large party of ladies and gentlemen, then proceeded to the parish church, where Mr. George Patrick described the building and monuments. The Vicar, the Rev. W. Reed, received the visitors and welcomed them, after which Mr. Patrick read a short history of Wandsworth, commencing with the "Stone Age," stating that implements of stone were frequently found, for the most part in the bed of the Thames. He mentioned Cæsar's camp, hard by, and spoke of a footpath that formerly led to it from this town. He attributed the name "Wandlesworth" to Roman origin; the name was first mentioned in 693. He could find no ancient records of the foundation of the church. The first mention of the building was in 1249. In the twentieth year of Edward I. the living was valued at ten marks, and at the Dissolution of the monasteries the rectory was vested in the Crown. The present church was commenced in 1725, and in 1779 was extended. Respecting the monuments, the one to the left of the altar was to the memory of Henry Smith, the well-known Surrey benefactor, who was a native of Wandsworth; the monument on the right was to Susannah Powell, whose husband was Yeoman of the Guard to Queen Elizabeth, James I., and other sovereigns. Having noticed the other monuments and brasses, Mr. Patrick concluded by referring to the settlement of the Huguenots at Wandsworth.

Mr. Ralph Nevill, F.S.A., next made a few observations on the church, and Mr. J. G. Waller on the brasses therein.

Mr. J. T. Squire then described the parish registers, which, he said, consisted of twenty volumes, commencing with the year 1603, and they were perfect, with the exception of only one volume which was missing, and which was coincident with the period when it was enacted that burials should be made in woollen shrouds. These registers were afterwards inspected by the visitors, who then adjourned to the Free Library to inspect Mr. Lawrence's collection of flint implements and other antiquities, and here Mr. Davis, the librarian, also read an interesting paper thereon. The meeting then separated, many members afterwards visiting the old Huguenot Cemetery before alluded to.

Mr. Mill Stephenson, Hon. Sec., at the conclusion of the meeting, announced that the annual excursion of the Society would, this year, be to Limpsfield and Titsey (the seat of Mr. Granville Leveson-Gower, who was present), about the middle of July. We may add that this district has not been visited by the Society since 1865. An account of the last visit will be found in the *Builder* of September 2, of the year named.

Heavy Newspapers for Australasia.—The Post Office has issued the following notice:—

"From the large number of newspapers for the Australasian colonies which are posted insufficiently paid, there is reason to suppose that the rate of postage chargeable on newspapers for those colonies is not generally known by the public in this country. Complaints, moreover, have been made by residents in the colonies to the Colonial post offices as to the charges collected on delivery of insufficiently paid newspapers from the United Kingdom. It seems desirable, therefore, to call attention to the fact that the payment of a penny does not in all cases cover the postage of a newspaper to Australasia, but is only sufficient if the newspaper does not exceed 4 oz. in weight, an additional penny being chargeable for every additional 4 oz. or fraction of 4 oz. The following is a list of newspapers exceeding 4 oz. in weight which have of late frequently come under notice, as insufficiently prepaid:—*The Times*, the *Graphic*, the *Illustrated London News*, the *Pictorial World*, the *Illustrated Sporting and Dramatic News*, the *Field*, the *World*, the *Standard* (when more than eight pages), the *Morning Post* (ditto), the *Daily Telegraph* (ditto), the *Daily News* (ditto), the *Guardian*, the *Builder*, the *Scotsman*, the *Mining Journal*, the *Lancet* (thick copy), the *County Gentleman*, the *York Herald* (with weekly supplement), the *Spectator* (with supplement), the *Glasgow Herald* (ditto), the *Glasgow Weekly Herald*, the *Somerset County Gazette*, the *Grocer* (with supplement), the *Hereford Times*, the *Lady*, the *Lady's Pictorial*, *Truth*, *Land and Water*, and *Wheeling* (with supplement). When newspapers are posted insufficiently prepaid, double the deficiency is collected on delivery. In order to prevent annoyance to their correspondents in the Australasian Colonies, the public are strongly advised to prepay the postage in full."

We may call the attention of our readers to the fact that we issue every week an edition printed on thin paper for foreign and colonial circulation. Each copy of this edition weighs between 7 oz. and 8 oz., and the charge for its postage to Australasia is twopence.

The Norwegian Stone Industry.—A company,—the first of its kind,—has been formed at Christiania, styled the "Stone-Exportassociation Varild," the object of which is to export raw and unpolished Norwegian granite, Labrador, syenite, marble, &c., for building and other purposes. The company will particularly give attention to the English and German markets. Respecting this industry, it may be of interest to add that Dr. Hans Reusch, the well-known Norwegian geologist of the Christiania Mineralogical Museum, has just prepared sample collections for the use of those desirous of utilising the various stones found in Norway for architectural, sculptural, or other purposes, with description of what each is most adapted for. Syenite in particular,—a beautiful green stone,—is becoming in great demand for ornamental purposes in Scandinavia and Germany.

"THE TRIANGULATION THEORY."

SIR,—It seems strange that at this time of day any one should call in question the existence of mathematical proportion in Mediæval buildings. The consensus of opinion in favour of the theory among writers who have gone into the subject, and the examples they have brought forward, are too striking to be ignored. Cockerell, Viollet-le-Duc, Street, and Waterhouse, in their published lectures, are names that occur to one on the spur of the moment among those who have given their adhesion to the principle. Mr. Street's little monograph of Stone Church, in Kent, may be consulted on the point. But surely the "unerring Mediæval instinct" of design is as apparent in mass as in detail. Set an ancient steeple and a modern one side by side, and any one can tell five miles off which is which. Is there no reason about this?

I do not, however, intrude upon your space merely to theorise, but chiefly to quote an instance (nearer home than Beauvais) from my own experience. This is the interesting church of Dronfield, in Derbyshire,—an example taken at haphazard, as being a church I happen to have measured-up pretty completely. A system of proportion, partly geometrical and partly arithmetical, seems to have obtained here. I take it that the principle is all one, providing well-defined ratios are established. One can easily conceive of two distinct systems co-existing, and overlapping, especially when the connexion between them is necessarily close. In Germany, for instance, I am told, on good authority, that the arithmetical system was chiefly in vogue, based on the Nos. 3, 5, 7.

At Dronfield the chancel is a remarkable Decorated work, and the rest of the church of various dates. This chancel is 23 ft. 6½ in. wide and 59 ft. (*i.e.*, 2½ squares) long. The great east window is formed on a double square: 18 ft. from string to springing, 18 ft. from spring to apex, and 18 ft. wide. The side windows are 6 ft. 9 in. wide, 13 ft. to springing, and 20 ft. 3 in. (or 3 squares) to apex. The roof has been so completely altered that it is impossible to tell its original height. The nave is the same length as the chancel, or 59 ft. 6 in. Being 14 ft. 8 in. wide it is (roughly) 4 squares long. Its height to wall-plate is given by two equilateral triangles, whose base is the width of the nave, centre to centre, and an equilateral triangle erected on the width of the bays, centre to centre, gives the springing-line of the arches. I was unable to measure the spire, but the total dimension from the ground, given me by some local builders from previous measurement, was just double the ascertained height of the tower, and practically the same as the total length of the church minus the steeple. Furthermore, the principal string of the tower divides it into two just half-way up. I have not worked out the whole church to scale, or no doubt further ratios would be established. I may mention that I am told by those who speak from measurement that the neighbouring church of Chesterfield is planned most exactly on a system of squares. Now, when one discovers such repeated "coincidences" as those above-quoted, one draws in their regard a conclusion similar to that which in "the argument from design" is deduced respecting the harmonies of visible creation; *i.e.*, an intelligent cause. And if such principles were known at Dronfield, depend upon it they were known at St. Denis, and, for the matter of that, probably at Drontheim too. I am not prepared to go into the question of Wilars de Honecourt and his sketch-book, but what does Mr. Pite make of Cesariano (*vide* Cockerell's paper on the buildings of Wykeham)?

But to return for a moment to the abstract question. Music has been defined to be "an emotional structure on a mathematical basis." I am convinced that the same may be said of the Fine Arts generally, and that, in fact, law (often no doubt undiscovered) is really the condition of beauty. At all events, if the most spiritual of the arts can suffer such constraints, need architecture consider herself outraged by the discipline? The extraordinary thing seems to me to be not that she should be subject to an abstract law conformable with the general law, but that the contrary should be supposed possible in a universe where all things are ordained "in number, weight, and measure."

2, *Halsey-street, S.W.* W. RANDOLPH.

TRAPPING SINK WASTE-PIPES.

SIR,—I was much pleased at reading your remarks in the "Note" on pp. 443-44 condemnatory of the practice of fitting-up sinks without any trap upon the waste-pipe when the said waste-pipe discharges openly outside. No good and sufficient reason can be given for the absence of the trap, for without it the waste-pipe simply becomes a stinking inlet air-pipe to the house. The plan is dangerous to health, and no doubt sometimes causes disease.

I was speaking to one of our leading Glasgow master-plumbers about this a few days ago. He stated that at present he was being forced to fit up some sinks in this insanitary style. A formal

expression of opinion from the British Medical Association, or other high authority, condemning the practice, would help to stop it.

W. P. BUCHAN.

Glasgow, June 15.

The Student's Column.

TOWN DRAINAGE.

XXV.—FLUSHING HOUSE-DRAINS.

THE quantity of water supplied to a town may be 25 gallons per day per head of the population. It is more than that in some towns, and less in others; but not much more than half of it is used in houses. There were at the last census in England and Wales 4,831,519 inhabited houses, and a resident population of 25,974,439 persons, or, say, 5·37 per house. Taking the average quantity of water supplied to a town at 25 gallons per head, that would be 134 gallons per house per day; but this includes all other requirements,—those, namely, for steam boilers, manufactures, breweries, slaughter-houses, warehouses, hospitals, workhouses, and public buildings generally; and watering streets, flushing sewers, fires, fountains, &c.,—that is to say, trade purposes and public sanitary uses,—and when the water used in these is deducted there remains out of the 134 gallons not more than about 80 or perhaps 90 gallons per house per day, the difference between this quantity and that used for trade and other purposes being wasted. But the quantity used in a house varies with the number of such conveniences as have been named in recent articles, and while the average quantity used in houses and converted into sewage may be 80 or 90 gallons per house per day, in small houses,—by far the greater number in any town,—it is not more than 50 gallons. Moreover, in all cases the water used is discharged into the drains in small quantities spread over about fourteen hours of the day, and, where there is no bath, not more than 3 gallons, perhaps, is discharged in any minute of that time. Where there is a bath in a house, used daily, the case is different: here, if the waste-pipe be sufficiently large,—say 1½ or 2 in. diameter, according to circumstances, as has been mentioned under the head of waste-pipes,—a discharge of 20 gallons of sewage per minute, for three minutes together, may take place in the house-drains, but more commonly at the rate of 10 gallons per minute for five or six minutes together.

In either case, therefore, the quantity is but small, considered as a stream of water, or rather sewage; and when there is no bath, or one but seldom used, a flush-tank is very useful for keeping the drain free from deposit, and free, therefore, from foul air in close proximity to the house. All efforts tend to this, while making such provisions as are necessary, as a matter of convenience, to carry off the heaviest rainfall from the back premises of houses. The occasion of this may not occur for a number of years, but it must be provided for in the carrying capacity of the drain, and while this requirement tends towards the enlargement of the drain, the other one,—which is the more important of the two, as being a matter of health,—tends in the opposite direction. On the whole, it may be said that a flush-tank is not only a useful, but a necessary appliance for the greater number of house-drains.

There are three kinds of flush-tank, two of which act without personal attention; the other is discharged by opening a valve as occasion may require. Of the two automatically-acting "tanks," or, rather, flushing-boxes, one is discharged by means of a siphon-pipe, the other tips up when full, reseating itself. It is hung on an axle, the ends of which are supported from below, the box turning between its supports, and, when full, discharging the water into the drain. When seated at rest, empty, in a horizontal position, its hinder end is heavier than the other, but before it becomes full the front end preponderates, and it is emptied at once. When made of sheet iron, galvanised with zinc, and hung with such bearings as wear but little with long use, it acts very well, except in one respect,—that there is a slight noise made by its coming back suddenly to its seat; but by counterweighting one end of the box, it may be hung so as to swing freely between its supports without coming to any seat at all, and thus working silently. The slight noise, however, is probably of no importance in most situations in which a tilting-box is fixed. If it is so, it can be avoided by adopting the earthenware box made by Messrs. Duckett & Son, of Burnley, which works silently when fitted with india-rubber stops. The sheet-iron box is, indeed, also fitted with these when required, and what slight noise is produced proceeds from the nature of the material rather than from the manner in which the box is seated. The earthenware box, however, can only be made of small dimensions, to hold, say, 3 or 4 gallons, while the iron box holds 20 gallons, or more if required.

The other kind of automatic flush-tank is discharged by a siphon-pipe, of which the form invented by Mr. Rogers Field, C.E., is that best known, called the annular siphon. The ordinary siphon consists of a bent tube, the outer leg of which is longer than the inner one. If the air in the outer leg be reduced in density by any means, the mouth of the inner leg being at the same time subject to the pressure of the atmosphere, the velocity of the water down the outer leg will be greater, the greater be the difference between the lengths of the outer and inner leg; but some difference is absolutely necessary to produce the action at all. For flush-tanks for house-drains a difference of a few inches only is sufficient, and a foot is sufficient for a large tank. With the ordinary bent tube Mr. Field's experiments showed that when the water adheres to the side of the pipe in its descent,—which it does when there is but a small stream,—it has but little hold on the air through which it passes, and carries but little with it, requiring that it run a long time before the siphonic action is produced. Mr. Field, therefore, formed the mouth of the pipe so that the water falls clear of the sides, being directed to the centre by an internal lip all round, and so falling in one stream surrounded by air, a portion of which it carries with it and expels from the lower end of the pipe through the water into which it dips, the air rising in bubbles through the water. The siphonic action goes on until the water in the tank falls to the mouth of the pipe, whereupon air is admitted and the action stops. If the sectional areas of the pipe and the tank bear such a proportion to each other, and to the rate of flow of the stream of water coming into the tank, as to allow sufficient time for the complete refilling of the pipe with air through its mouth near the bottom of the tank, then the water continues to rise in the tank until it reaches the top of the siphon-pipe, or inner tube, which, in this form, takes the place of the outer leg of an ordinary siphon; but the fixed parts necessarily retain the same relative capacities, while the volume of water coming into the tank may vary from time to time, so that the proportions are then altered, and the mouth of the pipe in the tank is sometimes closed before the siphon-pipe has become fully aërated, whereupon the action of the siphon begins before the water has risen to its proper height, discharging only a part of the quantity which is intended by the dimensions of the tank to be discharged at once. This irregularity may be prevented by emptying the small basin into which the siphon-pipe dips, and so letting in air at that end, after which the siphonic action will not commence again until the water in the tank has risen to its proper height. To empty the small basin under the discharge-pipe a secondary siphon of small dimensions may be placed over its edge, discharging into the drain; but with a regular stream of water, and true proportions of the fixed parts, this is unnecessary.

There is another way in which the action of the siphon is begun and made certain of continuation until the tank is emptied. It resembles the method of charging a siphon mentioned before as the plenum process, in contradistinction to the vacuum process, in the discharge of the contents of service-boxes in houses. There is a tumbling-box in the tank, acting in the same way as that first above-named,—it tips up when full. In the "Automatic Flusher" of Messrs. J. Stone & Co., of Deptford, the supply of water enters the tank in the ordinary way until it is nearly full, and is then directed into the tumbling-box, the emptying of which fills the throat of the bent siphon-pipe, and brings it into action at the time when it is desired that the tank shall be emptied,—that is, when full, and not before.

Pneumatic action is so useful in discharging the contents of cisterns and tanks that almost every maker of such things adopts it in one form or another. Messrs. Doulton & Co. make an excellent flush-tank in earthen ware for house-drains; also Messrs. Adams & Co., of York. The form made by Stone & Co. is the patent of Messrs. Denton & Butler. The agents of Field's flush-tanks are Messrs. Bowes Scott & Read, of Westminster.

With regard to the first-named of these contrivances for flushing drains, holding three or four gallons, its place is at the head of the branch drain of a water-closet in the yard or outdoor enclosure of a house, the slop-water of the house or washhouse being discharged into it, instead of into a gully. We have hitherto supposed a house to be supplied with water by a pipe from the street main, in which case a water-closet is supplied from a service-box overhead; but where there is no regular water-supply the ordinary slop-water of the house should be used as far as possible to meet the deficiency. Mr. A. M. Fowler, C.E., of Manchester, first devised the means of doing this, we believe. But it may be observed that a water-closet system ought in all cases to be accompanied by a regular water-supply. The whole system of house drainage, as well as of sewerage and sewage disposal, depends for its success on this being done. The place of the automatic flush-tank, holding twenty or thirty gallons, for a house drain of 6 in. diameter, is at the head of the main portion of the drain, irrespective of its branches, each of which is flushed by its special means, whether that be by a tipping-box at the ground level, or a service-box overhead; for, it may be observed, it is possible that each branch may be well flushed while the main portion of the drain remains but little better than a cesspool, though somewhat better, because it is flushed out when the rainfall is heavy enough.

RECENT PATENTS.

ABSTRACTS OF SPECIFICATIONS.

7,712, Lavatory-basins, &c. A. Harris.

To prevent misuse, according to this invention, the whole or a portion of the apparatus for emptying and filling is out of control of the person using the basin. Instead of being swung or emptied by hand, a footboard is employed, upon which the person using the basin or washstand stands. This footboard is attached by levers and connexions to the waste-valve or cock in such a manner that when a person stands upon the footboard the aperture of the waste-pipe is closed by the weight of the person standing, and when the weight is removed the waste-aperture is opened. For some cases an arrangement of parts and attachments are fitted so that the basin can only be filled on the insertion of a coin, or its equivalent into a suitable coin-freed apparatus connected to the actuating parts or the water-supply.

11,796, Improvements in Bell-pulls. D. O'Halloran.

To prevent bell-pulls being wrenched off, and for more effectively actuating them, and rendering them less liable to injury, the pull is, according to this invention, screwed or fitted direct to a bell-crank, and is controlled by a spiral spring fitted at one end of the rod of the bell-pull. The knob of the pull being always drawn tight into its cup or socket, it prevents its being easily wrenched off; and the violent ringing of bells by tradespeople and others, which distresses nervous or delicate persons, is prevented, as the pull of the bell is capable of adjustment, and the bell is really controlled by the action of the spiral spring.

15,857, Metallic Ceilings. W. R. Kumear.

This invention has for its object to provide a panelled ceiling in which the beading between the panels may be ornamented in relief, and in such a manner as to conceal or render harmonious the fastenings by which the ceiling is suspended; to provide ornamental "drops" at the intersections of the beading; and to provide panels for composing the ceiling, so constructed as to limit the liability to breakage in the corners incident to the panels of the ordinary construction.

16,729, Attaching Finger-plates to Doors. F. J. Stokes.

Instead of manufacturing finger-plates in one piece, with the holes for the screws or nails therein, the plates are by this invention made in two or more parts of suitable materials; thus, the centre-piece may be of china, glass, wood, or other suitable substance, and the two end parts of stamped metal with suitable screw or nail holes therein, and formed so that when fixed in position on a door they firmly hold in place the centre part.

12,896, False Backs to Fireplaces. J. M. Gerbold.

According to this invention, the fireback is constructed so as to be entirely loose, and with its attendant foot-plates or fittings capable of being

moved with little trouble and by any unskilled person from one fireplace to another. It may also be moved backward or forward so as to increase or diminish the space in which the combustion of the fuel is effected. A hinged top or flap is also fitted to regulate the amount or intensity of the heat projected into the apartment.

1613, Window Ventilation. H. C. Stevenson.

According to this invention, bet[illegible] movable wire screens, which work on ro[illegible]d a rectangular wooden frame which thus [illegible]as a chamber to contain disinfectants, which are contained in wide-mouthed jars supported on the frame. By this means the air passing in through the screen becomes charged with the disinfectant or inhalant, and the fumes of sulphurous acid for the destruction of germs may in this way be used without danger to the patient in a sick-room or to moisten the air.

NEW APPLICATIONS FOR PATENTS.

June 3.—9,136, G. Olliver, Ventilating Sewers and Drains.—9,137, G. Wilkes and J. Bishop, Attaching Door-handles to Spindles.—9,151, A. Sweet, Locks and Attaching Knobs to Spindles.—9,155, R. Wilford, Self-acting Fastenings for Windows, Doors, &c.—9,199, W. Harrison, Closing Swinging-doors.

June 4.—9,252, J. Anderson and W. Wilson, Whitewashing-brush, &c.—9,256, J. Shaw, Ventilating Sewers, Drains, &c. — 9,257, H. & H. Holloway, Tile-linings to Walls, &c.—9,262, J. Whitehouse and R. Blood, Lever-sash Fasteners.—9,270, C. Rogers, Wood Screws.—9,290, A. Elmendorf and Others, Water-closets.—9,305, E. Johns, Water-closet Basins and Traps.

June 5.—9,338, J. Ingleson, Fitting Window-sashes and Sash-frames.—9,379, P. De La Sala, Construction and Decoration of Buildings, &c.

June 6.—9,404, H. Vick, Chimney-pots.

June 7.—9,434, H. Heymann, Wood Screws.—9,436, J. Fleming, Paint.—9,486, L. Wilson, Dies for Bricks.—9,490, V. Carroll, Ventilation.

June 8.—9,519, R. Lutzmann, Mechanism for Folding-doors, &c.—9,533, A. Johnston and C. Hayward, Ventilation.—9,543, J. Roberts, Door Frames and Sashes.—9,561, J. Gersant, Brick-pressing Machinery.—9,562, J. Mitchell, Corrugated Structures.—9,567, W. Jones, Warming and Heating Buildings, &c.

PROVISIONAL SPECIFICATIONS ACCEPTED.

6,504, B. Phillipson, Water-closet Seats.—6,657, W. Bruce, Fire-grates and Ventilators combined.—6,860, J. Tall, Hinges with Stays, &c., for Ledge Doors.—7,001, B. Mitchell, jun., Retaining or Securing Doors in any desired position when open.—7,253, W. Hilliard, Dowel or Dowel-pin.—7,306, G. Williams, Flush Bolts for Doors, &c.—7,307, G. Williams, Barrel Bolts for Doors, &c.—7,881, N. Denny's Preserving and Anti-Fouling Paint.—8,071, F. Moore, Exhaust Ventilators.—8,183, J. Burford, Fireplaces for Kitchens, &c.—8,201, W. Allenby, Retaining Window-sashes at any desired height.—8,381, G. Butt, Screws and Nails.—8,466, D. Brown, Ventilators.—8,572, C. Taylor, Plane Irons.

COMPLETE SPECIFICATIONS ACCEPTED.

Open to Opposition for Two Months.

8,309, J. Mulligan and Another, Chimney or Ventilating Caps.—8,561, The Gas Patents Syndicate, Kilns for Firing Bricks, &c.—9,484, F. Bosshardt, Bath Rooms.—10,550, J. Pullar, Lockfast Gear for Actuating Fanlights.—11,398, P. Brentini, Compound for Removing Paint from Painted Surfaces.—11,483, H. Planner, Disinfecting Apparatus for Water-closets.—11,603, C. Darrah, Ventilators.—6,348, J. Wolf, Plastic Fire and Weather Proof Wood Mass.

RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

JUNE 6.—By WAINWRIGHT & HEARD (at Sherborne).

Sherborne, near—Loader's Hill Farm and 82a. 1r. 25p., f.	£3,963
Wootton Granville Farm and 63a. 2r. 3p., f.	3,339
Court Farm and 40a. 3r. 14p., f.	2,030
Church Farm and 233a. 2r. 28p., f.	7,000
Over Newland Farm and 200a. 2r. 31p., f.	5,500
F. pasture and woodlands, 41a. 1r. 29p.	1,180
F. cottage and garden	100

JUNE 11.—By INMAN, SHARP, HARRINGTON, & ROBERTS.

Brixton-hill—The f. residence, "Florence Lodge," and 3 a.	3,550

By FITCH & GRANT.

Sevenoaks, Granville-rd.—"Oak House," r. £75 p.a., u.t. 98 yrs., g.r. £15	600
Woodridings and Hillside, u.t. 98 yrs., g.r. £30, r. £150 p.a.	1,200
The residence, "Westwood," u.t. 98 yrs., g.r. £15, e.r. £75 p.a.	600
Dagenham—15, 16, and 17, Station-rd., u.t. 92 yrs., g.r. £9, r. £39 p.a.	170
Nos. 32 to 34, Station-rd., u.t. 92 yrs., g.r. £27, r. £117 p.a.	490

JUNE 12.—By ABBEY, RUTTER, & WAGHORN.

Regent-st.—8, 9, and 10, Denman-st., f. area, 3,500 ft.	6,370

By R. TIDEY & SON.

Kingsland—36 to 46 (even), and 50, 52, and 54, Englefield-rd., u.t. 34 yrs., g.r. £54. 10s., r. £340 p.a.	1,980
North Kensington—45 and 47, Treverton-st., u.t. 74 yrs., g.r. £15, r. £86 p.a.	£300

By CHESTERTON & SONS.

Kensington—10, Campden Hill-rd., u.t. 65 yrs., g.r. £17. 10s.	1,700

By D. YOUNG.

Stockwell—23, 24, and 25, Combermere-rd., u.t. 85 yrs., g.r. £18, r. £117 p.a.	900

By T. B. WESTACOTT.

Kentish-town—L.g.r. of £9, u.t. 75 yrs.	195
26, Brook-rd., f., r. £26 p.a.	300
35, Leighton-grove, u.t. 51 yrs., g.r. £9. 6s., r. £35 p.a.	305
51, Weedington-rd., u.t. 64 yrs., g.r. £7. 7s., r. £45 p.a.	345

By BAXTER, PAYNE, & LEPPER (at Knockholt).

Knockholt—1 & 2, Beech Cottages, f., r. £23. 8s. p.a.	280

JUNE 13.—By R. A. NOTLEY.

Harrow-rd—F.g.r. of £33, with reversion in 89 yrs. to e.r. of £153 p.a.	740
West Hampstead — 18, Woodchurch-rd., f., r. £138. 14s. 6d. p.a.	2,410

By FURBER, PRICE, & FURBER.

Bayswater—2, Palace Houses, u.t. 25 yrs., g.r. £24	3,980
Hackney—235, Dalston-lane, u.t. 50 yrs., g.r. £4. 16s.	290
Wimbledon—12, Pelham-rd., f.	290
Norbiton—7, Richmond Villas, u.t. 99 yrs., g.r. £6. 10s.	90

By GLASIER & SONS.

Upper Clapton—47, Clapton Common, f., e.r. £35 p.a.	500
St. Luke's—33 and 34, Great Arthur-st., f., area 1,000 ft.	380
Bethnal Green—42 to 50 (even), Pollard's-row, f., r. £118 p.a.	1,505

By D. WATNEY & SONS.

Pinner—Enclosure of f. land, 15a. 2r. 0p.	1,040

By JAMES HARRIS.

Ropley, Hants—The Little Grove Estate, 148a. 2r. 15p., f.	3,000

By C. D. FIELD & SONS.

Bermondsey—186, 188, and 190, Fort-rd., u.t. 47 yrs., g.r. £15, r. £89. 14s.	670
216 to 232 (even), Fort-rd., u.t. 45 yrs., g.r. £17. 15s., r. £143 p.a.	960
12, 14, 24 to 30 (even), Esmeralda-rd., u.t. 48 yrs., g.r. £30, r. £192 p.a.	1,295

By NEWSON & HARDING.

Hoxton—29 to 33, Charles-sq., and 2, Leverington-place, f., r. £150 p.a.	2,130
Stoke Newington—63, Church-st., u.t. 85 yrs., g.r. £10, r. £50 p.a.	500
Wood Green, Nightingale-road—F., r. £23 p.a.	350

By E. STIMSON.

East Dulwich—116, Crystal Palace-road, u.t. 78 yrs., g.r £5, e.r. £26 p.a.	230
Peckham—67, Montpelier-rd., u.t. 61 yrs., g.r. £6. 10s., r. £36 p.a.	220
Tulse Hill—44 and 46, Arlingford-rd, f., e.r. £74 p.a.	700
Brixton—30, Barnwell-rd., u.t. 89 yrs., g.r. £5. 5s., e.r. £36 p.a.	160
West Norwood—3, York-rd., u.t. 91 yrs., g.r. £12, r. £95 p.a.	1,050
Bermondsey—89, Abbey-st., f., r. £28 p.a.	330

By C. C. & T. MOORE.

Commercial Road—Nos. 321 and 323; and 2 and 4, Bromehead-st., u.t. 46 yrs., g.r. £60, r. £156 p.a.	750
St. George's-in-East—148 to 151, St. George's-st., c., r. £112 p.a.	1,170
Ratcliff—Broad-st., "The East India Arms," p.h., c., r. £50 p.a.	1,400
1, 39, 73, 75, and 99, Broad-st., c., r. £98 p.a.	1,010
8, Butcher's-row, c., r. £50 p.a.	550
21 and 23, Stepney-causeway, c., r. £54. 12s. p.a.	310
6, John-st., c., r. £35 p.a.	480
Bow Road—No. 179, c., r. £25 p.a.	500
Whitechapel—1 to 7 (odd), Black Lion-yd., c., r. £94. 10s. p.a.	580
1 and 7, Black Lion-yd. East, c., r. £40 p.a.	440
4, 6, and 9, Black Lion-yd., f., r. £28 p.a.	630
Stepney—118 and 120, Bromley-st., u.t. 8 yrs., g.r. £4. 15s., r. £53 p.a.	125

JUNE 14.—By C. & H. WHITE.

Worplesdon—"Perry Hill Cottage," f., r. £30 p.a.	580
Brixton—5, 6, and 10, Russell-grove, u.t. 31 yrs., g.r. £12, r. £85 p.a.	930
Southwark—6 and 9, Hayles-st., u.t. 24 yrs., g.r. £10, r. £56. 8s p.a.	365
10, 11, and 12, Hayles-st., u.t. 28 yrs., g.r. £12, r. £81. 12s. p.a.	555
Lambeth—94, Regent-st., u.t. 19 yrs., g.r. £4. 4s., r. £36. 10s. p.a.	125

By TOBIN & SONS.

Mile End—109, 111, and 113, Jamaica-st., u.t. 20 yrs., g.r. £12	245

By NORTON, TRIST, & GILBERT.

Willesden—F. cottage and plot of land, area 38,000 ft.	1,000

By W. A. BLAKEMORE.

Westminster—79 and 81, Ponsonby-pl., u.t. 36 yrs., g.r. £10. 10s., r. £110 p.a.	1,000

[*Contractions used in this list.*—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; e.r. for estimated rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; yd. for yard, &c.]

The Society of Engineers.—Arrangements have been made for the members and associates of this Society and their friends to visit the East London Waterworks at Lea Bridge, Walthamstow, and Waltham Abbey, on Thursday, the 27th instant.

MEETINGS.

SATURDAY, JUNE 22.

Glasgow Architectural Association.—Excursion to Dalzell House, Motherwell, Hamilton Palace, Bothwell Castle, and Bothwell Church.

TUESDAY, JUNE 25.

Builders' Clerks' Benevolent Institution.—Special General Meeting of the donors and subscribers for the election of a pensioner. 7.30 p.m.

WEDNESDAY, JUNE 26.

Builders' Foremen and Clerks of Works' Institution.—Half-yearly meeting of the Directors. 8.30 p.m.

THURSDAY, JUNE 27.

Society of Engineers.—Visit to the East London Waterworks at Lea Bridge, Walthamstow, and Waltham Abbey.

FRIDAY, JUNE 28.

Society of Arts.—Conversazione at South Kensington Museum. 8.30 p.m.

SATURDAY, JUNE 29.

Architectural Association.—Third vacation visit to the Halls of several City Companies (see advt).

Miscellanea.

Water-Supply and Sewage System of Swedish Towns.—The Swedish technical journal, the *Helsovän*, of Stockholm, in referring to the hygienic condition of the towns of Sweden, furnishes some interesting, though somewhat startling, statistics respecting their water-supply and discharge of sewage. In Stockholm, for instance, no regular water-supply was established until 1861, the water being then drawn from the adjacent Lake Mälare, but the sewage works were not commenced until seven years after, and were, in reality, as regards the central and most populous part of the town, not completed until 1884. The cost of the water installation was 300,000*l.* and that of the sewage works 200,000*l.* The network of the former is 146,000 mètres, and that of the latter 14,000 mètres in length. In Gothenburg, the water and sewage works were finished in 1860, the cost of the former, though only 92,000 mètres in length, being 123,000*l.*, and that of the latter, 7,000 mètres, 75,000*l.* Only twenty more towns in Sweden have a regular and continuous supply of water, water being in all others obtained from wells, ponds, &c., and in ten of the towns thus favoured, it is furnished from some adjacent lake by natural pressure; in the remainder pumping is necessary. In from 80 to 90 per cent. of the houses in these towns the supply is continuous. The consumption varies from 5½ gallons at Udevalla to 40 gallons at Skövde per individual diurnally, being in Stockholm 10·10 gallons. In thirteen towns water for domestic purposes is furnished by the city free of charge, but in the remaining nine it is charged for, including Stockholm, the charge varying from 1 kr. (1s. 1d.) to 3 kr. (3s. 4d.) per room in the house annually. In one town alone,—Malmö,—the water-rate is assessed upon the rent. The cost of maintenance and working is very heavy in Stockholm,—viz., 12,000*l.* a year; whereas in Gothenburg, with about half the population, the cost is only 2,000*l.* Turning to the question of sewage, we encounter some startling facts, as, of the towns boasting waterworks, no fewer than eight are utterly unprovided with sewers of any kind, including such important towns as Malmö, Lund, Linköping, and the two towns consuming most and least water named above. Needless to say such sanitary arrangements are also wholly absent in all smaller towns. Naturally such defective hygienic arrangements throughout the country cause our contemporary some anxiety; but consolation is found in the circumstance that "much has been done to improve the same in recent years, and that the death-rate in provincial towns is decreasing."

Salop County Surveyorship.—One hundred and twenty-five applications were sent in for this appointment, the committee of selection reducing the number to seven, and afterwards to three. These three gentlemen,—viz., Mr. A. T. Davis, Borough Surveyor, Stratford-on-Avon; Mr. C. Law Green, Nuneaton; and Mr. H. T. Wakelam, Garston District, Liverpool,—attended the County Council meeting on the 15th inst., when the voting resulted as follows:—Davis, 38 votes; Wakelam, 20 votes; Law-Green, 1 vote. Mr. Davis was finally unanimously elected.

Appointment of Registrar of Patent Agents.—Mr. H. Howgrave Graham, Secretary to the Institute of Patent Agents, has been appointed by the Council as Registrar. The offices are at No. 19, Southampton-bdgs., W.C.

Society of Arts' Conversazione.—The annual *conversazione* of the Society of Arts is fixed to take place at the South Kensington Museum (by permission of the Lords of the Committee of Council on Education), on Friday, June 28.

The London County Council.—At the meeting of this Council on Tuesday last, the Improvements Committee recommended that the proposal of the Kensington Vestry for widening High-street, as a metropolitan improvement, at a cost of 380,000*l.* (no contribution being made by the Vestry) be not entertained, as the plan proposed was not the most economical one which could have been suggested, and not one which should be undertaken at the sole cost of the Metropolis. This recommendation, after some discussion, was adopted.—The report of the Main Drainage Committee referred to complaints as to the flooding of property, and the matter was referred back, with a view of ascertaining some means of preventing the floods.—The Bridges Committee reported that they had proceeded upon the resolution of the Council of May 7, instructing them to take into consideration the report of the Committee appointed by the House of Commons in 1884, expressing the opinion that three means of communication were absolutely necessary east of London Bridge, viz., a bridge at or near the Tower, a tunnel at Shadwell, and a tunnel at Blackwall, and to advise the Council which of the latter should be first constructed. The Committee, in considering the matter, had had regard to the fact that an Act of Parliament had been obtained for the construction of a tunnel at Blackwall, and that contracts had been entered into and purchases completed for property required for the approaches, amounting, approximately, to 150,000*l.* The Committee recommended:—"That the Blackwall tunnel take precedence of all other schemes of trans-communication, and that the Committee be instructed to consider the other schemes proposed, with a view of reporting as to their probable cost, and as to the order in point of time in which they shall be proceeded with." The recommendation was agreed to.—With regard to the two appointments of Engineer and Mechanical Engineer to the Council, it was, on the suggestion of the Chairman, resolved that the Main Drainage Committee and the Bridges Committee should each name a few members (including all the members of the Council who are engineers) to form a joint sub-committee to examine and consider the numerous applications made for the appointments, and to submit lists of names of the most eligible candidates to the Standing Committee for further consideration and report to the Council.

Edinburgh Architectural Association Annual Excursion.—The annual excursion of the Edinburgh Architectural Association took place on Saturday last, to Peebles and the vicinity. Arriving in Peebles about twelve o'clock, the party drove to Neidpath Castle, which was examined by the company, to whom explanations were given by Mr. David MacGibbon. He explained that it had originally been one of the keeps of the fourteenth century, and had been the residence of the Hays of Yester. It was an example of the L plan of the second period, built with very heavy walls, in some cases more than 10 ft. thick. The party also visited Drochil Castle, Lyne Church, and Roman Camp, Barns Tower, and Peebles churches. Drochil Castle, Mr. MacGibbon explained, had been built by the Earl of Morton shortly before his execution in 1551. He described it as intended for a palace rather than a castle, and an examination of its arrangements quite confirmed that view. The churches were examined under the conductorship of Mr. Hippolyte J. Blanc. He noted Lyne Church as one of a like kind to pre-Reformation churches found in various parts of Scotland. It was a structure of about the end of the fifteenth century, and was singularly devoid of architectural detail or ornamentation. In Peebles the party viewed the remains of the original parish church and other ecclesiastical edifices, returning home with the evening train very much pleased with their day's outing.

Leek Cemetery Competition.—The designs submitted to the Leek Improvement Commissioners for the laying out of the cemetery extension were laid before the general body of Commissioners at the meeting of the Board last week. The recommendation of the Markets and Estates Committee had been that the design "Out of the Noise" should be adopted, and this opinion was confirmed by the vote of the general body. The sealed envelope was then opened, and it was found that Messrs. W. Sugden & Son, architects, of Leek, were the authors of the successful design.

The Cripples' Home, Marylebone-road. The remodelling of this building, situate in the Marylebone-road, facing Madame Tussaud's Exhibition, and having the main entrance in Northumberland-street, has just been completed, and it is to be opened on the 29th inst. by H.R.H. the Princess Christian. The Institution has for its object the welfare of those who, by their pitiable condition, are prohibited from taking an active part in life, though in many other respects they equal and often surpass their friends outside in general intelligence, and keen and sensitive mental capacity. The "Home" has been partially rebuilt, the wing next Marylebone-road having been altered, raised, and arranged to work in with the new buildings, which now cover an area of upwards of 5,000 superficial feet, and contain some sixty rooms, with corridors and suitable offices, and comprising basement, ground, first, second, third, and fourth floors, the whole covered with a flat asphalted roof, enabling the inmates to have the benefit of fresh air and exercise. A hydraulic lift, by Messrs. Clark, Bunnett, & Co., has been provided for raising the patients to each floor, in addition to which there are two artificial stone staircases. The new buildings are fireproof throughout, the floors being covered with Gregory's wood-block paving. The sanitary arrangements are by Mr. G. Jennings, the heating by Messrs. Berry & Co. The architects, Messrs. Habershon & Fawckner, have paid special attention to the requirements of the institution. The design is Italian in style. The walls are faced with picked stock bricks, the dressings, portico, &c., being of buff terra-cotta, manufactured by the Hathern Brick Company, Leicester. The original Cripples' Home (before the restoration) consisted of more than one house connected by doors and passages, and as the levels were not the same, there were steps in all directions, causing much inconvenience, and often danger, to the cripples. The building now erected is for 100 inmates, whilst every endeavour has been used to save labour on the one hand and give comfort on the other. The system of internal ventilation has been arranged by Dr. Routh. The new floors and all staircases are absolutely fireproof. The works have been carried out by Messrs. Gregory & Company, contractors, of Clapham Junction, at a cost of about 9,000*l.*, Mr. G. Reed being the clerk of works.

The English Iron Trade.—The English iron market is not much more active than last week, but it has not lost its general steadiness, and in some departments is even firmer. Business in pig-iron is moderate, buyers showing little disposition to advance it, and sellers being not at all anxious to sell, for the present at any rate. Scotch warrants have been firmer, but makers' iron shows some changes. Cleveland iron is a shade lower. The brands of other districts, notably Bessemer descriptions, keep firm. Manufactured iron is, on the whole, unchanged; although trade is slow, both Staffordshire and Welsh bars are 2s. 6d. a ton higher. Steel continues in moderately good demand. Rails have declined 2s. 6d. in price; on the other hand, wire rods have been advanced 2s. 6d., and billets and slabs as much as 7s. 6d., although business, with the exception of billets, is quiet. Some fresh orders for ships are still being placed, but buyers, as a rule, are reluctant. Engineers are doing a capital trade. *Iron.*

Haddington.—Mr. H. F. Kerr, whose interesting paper on Haddington appeared in the *Builder* last week, writes to say that, as we surmised and suggested by our foot-note on p. 446, an error occurred in the description of the boundary of the Friars' Croft, where the first clause had it "on the *east*." Mr. Kerr writes to say that it should read "*west*," that it is so in the Disposition quoted, and in his draft-paper. But there was an error in the transcription of the MS. sent to us, and the error was unnoticed by the author in the necessarily very hurried revisal of the "proof" sent to him.

A Valuable Treasure.—Austrian journals state that a very valuable treasure has been unearthed at Szilágysomlyo, in Transylvania, consisting of a number of massive dishes, urns, &c., of gold of high artistic merit. The find is valued at 80,000*l.* It was in this locality that the famous so-called "Attila Treasure," now in the private museum of the Imperial Austrian family at Vienna, was discovered in 1794.

A Church of Cast-steel.—An ironworks at Hennegau, in Germany, has just completed a church manufactured from cast Bessemer steel. It is intended for the island of Manilla, where frequent earthquakes render a brick structure unsafe. After careful calculations, this steel church will, it is believed, be capable of resisting earthquakes of very severe nature. Its weight is 1,600 tons.

"Tonks, Limited."—Messrs. W. Tonks & Sons, of Birmingham and London, inform us that they have transferred their business to a Limited Company, by which it will in future be carried on, under the name of "Tonks, Limited." The shares are not open for public subscription, the whole capital having been subscribed for by the members of the families of the partners.

PRICES CURRENT OF MATERIALS.

		£. s. d.	£. s. d.
TIMBER.			
Greenheart, B.G.	ton	6 10 0	7 10 0
Teak, E.I.	load	11 0 0	15 0 0
Sequoia, U.S.	foot cube	0 2 3	0 3 0
Ash, Canada	load	3 10 0	5 0 0
Birch ,,		3 10 0	6 0 0
Elm ,,		4 0 0	5 0 0
Fir, Dantzic, &c.		2 0 0	3 10 0
Oak ,,		2 10 0	4 10 0
Canada		5 10 0	7 10 0
Pine, Canada red		3 5 0	4 0 0
,, yellow		3 10 0	5 10 0
Lath, Dantzic	fathom	4 10 0	5 10 0
St. Petersburg		5 0 0	6 10 0
Wainscot, Riga, &c.	log	2 15 0	4 5 0
Deals, Finland, 2nd and 1st	std. 100	9 10 0	11 0 0
,, 4th and 3rd		8 0 0	9 0 0
Riga		7 10 0	9 0 0
St. Petersburg, 1st yellow		11 0 0	15 0 0
,, 2nd ,,		10 0 0	11 0 0
,, white		7 10 0	10 10 0
Swedish		9 0 0	16 0 0
White Sea		9 10 0	17 0 0
Canada, Pine, 1st		16 0 0	26 10 0
,, ,, 2nd		11 0 0	17 10 0
,, ,, 3rd, &c.		8 0 0	10 10 0
,, Spruce, 1st		9 10 0	11 0 0
,, ,, 3rd and 2nd		7 10 0	9 0 0
New Brunswick, &c.		6 15 0	8 15 0
Battens, all kinds		6 10 0	20 0 0
Flooring Boards, sq., 1 in., prepared, First		0 11 0	0 14 0
Second		0 8 0	0 10 0
Other qualities		0 5 0	0 7 0
Cedar, Cuba	foot	0 0 4½	0 0 4½
Honduras, &c.		0 0 4½	0 0 4½
Mahogany, Cuba		0 0 4½	0 0 4½
St. Domingo, cargo average		0 0 4½	0 0 5½
Mexican ,,		0 0 4½	0 0 5½
Tobasco ,,		0 0 5½	0 0 6½
Honduras ,,		0 0 5½	0 0 6½
Box, Turkey	ton	4 0 0	12 0 0
Rose, Rio		15 0 0	20 0 0
Bahia		14 0 0	18 0 0
Satin, St. Domingo	foot	0 0 8	0 1 0
Porto Rico		0 0 9	0 1 3
Walnut, Italian		0 0 4½	0 0 6½
METALS.			
IRON—Bar, Welsh, in London	ton	5 5 0	5 10 0
,, ,, at works in Wales		4 15 0	5 0 0
,, Staffordshire, in London		5 10 0	6 10 0
COPPER—			
British, cake and ingot	ton	45 10 0	46 10 0
Best selected		47 0 0	47 10 0
Sheets, strong		53 0 0	0 0 0
Chili, bars		41 15 0	0 0 0
YELLOW METAL	lb.	0 0 5	0 0 5½
LEAD—Sheet, English	ton	13 10 0	14 0 0
SPELTER—			
Silesian, special	ton	18 0 0	18 2 6
Ordinary brands		17 17 6	18 0 0
TIN—			
Straits	ton	90 0 0	0 0 0
Australian		90 0 0	0 0 0
English Ingots		94 0 0	0 0 0
ZINC—English sheet	ton	21 0 0	22 0 0
OILS.			
Linseed	ton	20 15 0	21 2 6
Cocoanut, Cochin		28 10 0	27 10 0
Ceylon		24 10 0	0 0 0
Palm, Lagos		24 0 0	0 0 0
Rapeseed, English pale		26 10 0	0 0 0
,, brown		25 0 0	0 0 0
Cottonseed, refined		25 15 0	27 0 0
Tallow and Oleine		19 0 0	44 0 0
Lubricating, U.S.		5 0 0	6 0 0
,, refined		7 0 0	12 0 0
TAR—Stockholm	barrel	1 3 0	1 3 6
Archangel		0 15 9	0 16 0

TENDERS.

[Communications for insertion under this heading must reach us *not later than* 12 *Noon on Thursdays.*]

BROMLEY (Kent).—For laying 600 ft. of 9-in. stoneware pipe sewer, with manholes, &c., in Bird-in-Hand-lane, for the Bromley Local Board. Mr. Hugh S. Cregeen, surveyor:—

Woodham & Fry	£116 0 0
A. Attwood	104 18 6
A. Palmer	104 0 0
T. Lansbury (accepted)	91 0 0

CAMBRIDGE.—For erecting new Mission Church in St. Barnabas' Parish, Cambridge. Mr. E. P. Loftes Brock, F.S.A., architect:—

Kynoch & Co., London	£2,320 0 0
Bell & Son, Cambridge	2,000 0 0
Allen & Son, London	1,935 0 0
Sendall, Cambridge	1,900 0 0
Batchelor, London	1,879 0 0
Wade, St. Neots	1,838 0 0

CONTRACTS AND PUBLIC APPOINTMENTS.

Epitome of Advertisements in this Number.

CONTRACTS.

Nature of Work, or Materials.	By whom Required.	Architect, Surveyor, or Engineer.	Tenders to be delivered.	Page.
Engine and Boiler House, &c.	Borough of West Ham	L. Angell	June 25th	ii.
Well Sinking, &c.	West Cowes Loc. Bd.	H. Moore	do.	ii.
Roadmaking Work	Lewisham Bd. of Wks.	*Official*	do.	ii.
Sand, Lime, Cement, Drain Pipes, Stone, &c.	St. Martin-in-the-Fields Vestry	H. Jacques	do.	xii.
Cleaning and Whitewashing Infirmary	Chelsea Guardians	*Official*	June 28th	xii.
Repairs to Fences	Lambeth Guardians	do.	do.	xii.
Pipe Sewers, &c.	St. Mary (Battersea) Vestry	J. T. Pilditch	do.	xii.
Re-construction of Culverts, &c.	Wood Green Local Bd.	H. Robinson	June 27th	ii.
Cleaning Vestry Hall	St. George-in-the-East Vestry	*Official*	do.	xii.
Boilers, &c.	Westminster Union	J. Waldram	June 28th	ii.
Broken Granite	Walthamstow Loc. Bd.	*Official*	do.	ii.
Flints	do.	do.	do.	ii.
Portland Cement	Brighton Town Council	G. R. Andrews	do.	xiii.
Alterations, &c., "Bull Inn," Tottenham		G. L. Wilson & Co.	do.	xiii.
Bar and other Fittings to ditto.		do.	do.	xiii.
Asphalte Paving Works	Commrs. of Sewers	*Official*	do.	xiii.
Purchase & Pulling Down of Building Mat.	School Bd. for London	do.	July 1st	xii.
Carts and Vans	Hornsey Local Board	T. de Courcy Meade	do.	xii.
Dwelling-house, Old Kent-road	Met. Asylums Board	T. W. Aldwinckle	do.	xii.
Extension of Sewer Outfall	Eastbourne Town Coun.	C. Toms	do.	ii.
Pipe Sewers, &c.	Bermondsey Vestry	G. Elkington	do.	xiii.
Roadmaking Works	Rotherhithe Vestry	E. Thomas	July 2nd	xii.
Flints	Southend Local Board	P. Dodd	do.	xiii.
Granite Siftings	St. Mary Abbott (Kensington) Vestry	*Official*	do.	xii.
New Stables, &c., Ossett Station	G. N. Ry. Co.	R. Johnson	July 4th	xii.
Station Works, Dudley Hill	do.	J. Fraser & Son	do.	ii.
Removal of Street and House Refuse	St. Giles (Camberwell) Vestry	*Official*	July 5th	xii.
Water Supply Works, Aston, &c.	Rotherham U.R.S.A.	D. Jennings	do.	xiii.
Brewery Stabling, &c., near Southampton	W. H. Complin, Esq.	E. C. Poole	July 6th	xiii.
Brick Tank and Boundary Wall	Stockport Corporation	J. Jacques	July 9th	xiii.
Painting Menai Suspension Bridge	Com. of H.M. Works	*Official*	do.	xii.
Foundations of New Bankruptcy Offices	do.	do.	July 10th	xii.
New Kilns, &c., at the Maltings, Stowmarket	Messrs. Prentice & Co.	Crickmay & Son	Not stated.	xiii.
Guernsey Granite Spalls	Mile End Old Town Guardians	*Official*	do.	xii.
Enlargement of Schools	School Bd. for London	do.	do.	xii.
New Cavalry Barracks, Dublin	War Department	do.	do.	i.
Painting, &c., Works, Plymouth	do.	do.	do.	i.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Applications to be in.	Page.
Two Sanitary Inspectors	Paddington Vestry	120*l.*	July 1st	xviii.
City Surveyor	Carlisle Corporation	350*l.*	July 4th	xviii.

CODICOTE (Herts).—For repairs, alterations, &c., to the Fulling Mill, Hollards, and Hall-hill Farms, for Colonel R. S. Hall. Mr. Russell Austin, Assoc. M. Inst. C.E., Hertford:—

Amos Welch (accepted)	£208 16 6

HALESWORTH (Suffolk).—For new roofs and other works to the parish church. Messrs. F. & H. Francis & Sons, architects, London:—

Grimwood & Sons	£1,035 0 0
F. Woodyard	1,005 0 0
Wm. E. Martin	983 0 0
F. G. Anstey	949 0 0
T. W. Martin	939 0 0
Francis Clarke	885 0 0
Geo. R. Hawkins	882 0 0
Sudkin & Son	881 0 0
Walter E. Letch	877 0 0
Geo. Dobson	869 0 0
Alfred Brown	860 0 0
Grimwood & Bullen	850 0 0
Wm. Hubbard	815 0 0
G. E. Hawes	792 0 0
Henry Plummer	779 0 0
H. Everett & Son	765 0 0
Cornish & Gaymer	747 0 0
S. Howard & Sons (accepted)	637 0 0

HEMEL HEMPSTED.—For the erection of a detached cottage, Kingsland-road, Boxmoor, for Mr. Robert Comber. Mr. W. A. Fisher, architect, Hemel Hempsted:—

Payne, Hemel Hempsted	£435 0 0
Horn, Hemel Hempsted (accepted)	425 0 0

HEMEL HEMPSTED.—For alterations and new shop premises, Nos. 90 and 92, Marlowes, for Mr. C. Waters. Mr. W. A. Fisher, architect, Hemel Hempsted:—

Payne, Hemel Hempsted	£575 0 0
Horn,* Hemel Hempsted	570 0 0

* Accepted, subject to modifications.

LONDON.—For alterations, &c., to the "Swan," Sloane-street, W., for Mr. E. H. Barnes. Mr. H. I. Newton, architect, 49, Victoria-street, Westminster, S.W.:—

Lea Bros., Regent-street	£1,610 0 0
H. Burman & Sons, Kennington-park	1,605 0 0
S. Godden, Bryanston-square	1,593 0 0
S. R. Lamble, Kentish-town	1,423 0 0
W. J. Smith, Son, & Fletcher, Belgravia (accepted)	1,320 0 0

LONDON.—For alterations and additions to the "Washington" Music-hall, York-road, Battersea, S.W., for Messrs. G. W. Moore & Son. Mr. H. I. Newton, architect, 49, Victoria-street, Westminster, S.W.:—

J. Beale, Westminster Bridge-road*	£1,300 0 0

* Accepted.

[List published last week.]

LEYTON.—For the construction of surface-water sewers, for the Leyton Local Board. Mr. William Dawson, Assoc. M. Inst. C.E., Engineer:—

Woodham & Fry	£793 12 0
Jno. Adams	792 10 0
J. & J. Neave	690 0 0
Joseph Jackson	675 0 0
G. G. Rutty	660 5 0
Robt. Stroud	650 7 6
Eli Wilson	647 5 0
Walter G. Harris	599 0 0
J. Reeve	592 6 9
J. S. Jackson (accepted)	579 0 0

LONDON.—For rebuilding the "Wheatsheaf" public-house, Fulham-road, Fulham, S.W. Messrs. P. D. Tuckett & Co., surveyors, 10a, Old Broad-street, E.C. Quantities by Messrs. R. L. Curtis & Sons, 119 and 120, London-wall, E.C.:—

W. H. Smith	£4,999 0 0
Dove Bros.	4,875 0 0
Higgs & Hill	4,840 0 0
Grover & Son	4,500 0 0
Ashby Bros.	4,317 0 0
G. H. & A. Bywaters	4,313 0 0
J. Morter	4,292 0 0
B. E. Nightingale	4,115 0 0
S. J. Jerrard (accepted)	4,079 0 0

LONDON.—For the erection of two blocks of workmen's dwellings on a site in Grotto-passage, Paddington-street, in the parish of St. Marylebone, for the Portland Industrial Dwellings Company, Limited:—

Morter	£3,725 0 0
Colls & Co.	3,695 0 0
Patman & Fotheringham	3,625 0 0
Simpson	3,595 0 0
Boyce	3,430 0 0
Wall Bros.	3,374 0 0
Falkner	3,247 0 0
Stimpson & Co.	3,236 0 0
Lathey Bros.	3,187 0 0
Staines & Son (accepted)	3,173 0 0

LONDON.—For alterations and repairs at the St. George's Wesleyan Chapel, E., for the London Wesleyan Mission, East. Mr. F. Boreham, architect:—

Gregar	£969 10 0
Cleaver	945 0 0
Battley	921 0 0
Jervis Smith	870 0 0
Dove Bros.	865 0 0
Woodward & Co.	863 0 0
J. Allen & Sons	857 0 0
Anley	840 0 0
Chessum	847 0 0
Goodman	822 0 0
Holloway (accepted)	771 0 0
Warming.	
Stainton	126 0 0
Perkins & Son	124 15 0

LONDON.—For erecting business premises at Walham Green, for Mr. H. M. Rowe. Mr. A. Pope, architect:—

	A*
Davis	£3,693 0 0 ... £180 0 0
W. Smith	3,600 0 0 ... 150 0 0
Chamberlain	3,582 0 0 ... 163 0 0
Gregory	3,575 0 0 ... —
Haines	3,560 0 0 ... 210 0 0
Avis & Son	3,550 0 0 ... —
Oldridge	3,394 0 0 ... 158 0 0
Kynoch & Co.	3,353 0 0 ... 120 0 0
Jerrard	3,320 0 0 ... 123 0 0
Lathey	3,267 0 0 ... 99 0 0
Dorr	3,180 0 0 ... 200 0 0
Haywood	3,135 0 0 ... —
W. H. Smith	2,998 0 0 ... 105 0 0

* Deduct if executed in Box Ground stone in lieu of Portland.

LONDON.—For erecting four shops at Balham High-road, for Mr. C. Curtis. Mr. J. Nixon Horsfield, architect:—

Batley, London	£4,848 0 0
Dickeson & Wallis, Balham	4,591 0 0
Turtle & Appleton, Wandsworth	4,545 0 0
Lordan & Sons, Tooting	4,486 0 0
T. Potterton, Balham	4,175 0 0

LONDON.—For first portion of drainage works, and formation of roads, on the Frognal Mansion Estate, Hampstead. Mr. James Neale, F.S.A., architect and surveyor, 10, Bloomsbury-square, W.C. Levels by Messrs. Physick & Lowe, of 95, Park-street, Grosvenor-square, W.:—

E. Rogers & Co., Notting-hill	£1,260 0 0
Nowell & Robson, Kensington	1,229 0 0
Neave & Sons, Paddington	1,163 0 0
Charles Killingback, James-street, Camden-town (accepted)	1,135 0 0

LONDON.—For new shop-front, &c., at 27, Tottenham-street, N.W., for Mr. J. T. Bolding. Mr. Walter Graves, architect, Winchester House, Old Broad-street:—

F. Sage & Co. (accepted)	£138 0 0

LONDON.—For new shop-front and jeweller's interior air-tight fittings to premises, 66, Park-street, Camden Town, N.W., for Mr. George Cornish:—

S. Yardley & Sons (accepted)	£115 0 0

[No competition.]

LONDON.—For interior fittings throughout to No. 5, Prince's-street, Hanover-square, W., for Messrs. F. G. Buhl & Co.:—

S. Yardley & Sons (accepted)	£147 0 0

[No competition.]

LONDON.—For alterations and repairs at Finsbury Park Wesleyan Chapel. Mr. F. Boreham, architect:—

Campion	£780 15 0
Oldis	737 0 0
J. Holloway	695 0 0
J. Chessum & Sons (accepted)	640 0 0

LONDON.—For the erection of three houses in Pollard-street, Bethnal-green, for Messrs. J. W. and E. M. Cook. Mr. J. Young, architect, 3, Great Winchester-street:—

Beale	£1,140 0 0
Wire	1,134 0 0
Forrest	1,007 10 0
F. Carter	993 0 0

LONDON.—For warming the Longford-road School, on the low-pressure hot-water system, for the School Board for London. Mr. T. J. Bailey, architect:—

H. C. Price, Lea, & Co.	£737 0 0
J. G. Wagstaff	680 0 0
C. P. Kinnell & Co.	670 0 0
W. Jenkins & Son	645 10 0
Emley & Sons, Limited	630 0 0
J. & F. May	595 0 0
R. H. & J. Pearson	589 10 0
J. & C. Christie	562 0 0
Eagle Iron and Engineering Company	525 0 0
Hayward Bros. & Eckstein	520 0 0
Jones & Attwood	505 0 0
R. Crane	500 0 0
J. Grundy	500 0 0
W. J. Cannon	498 0 0
T. Green & Son, Limited	464 0 0
Purcell & Nobbs (accepted)	439 0 0

LONDON.—For erecting "Cat's Home," Kensal Green. Mr. E. P. Loftus Brock, F.S.A., architect:—

Butland	£1,067 0 0
Allen & Son	833 0 0
Kynoch	820 0 0
Crask	794 0 0
Nye	787 0 0
Batchelor	786 0 0
Bowden	689 15 0
Mattock	665 0 0

LONDON.—For alterations and additions to premises, No. 18, Grafton-mews, Tottenham Court-road. Mr. G. S. Finlay, architect:—

Bywater	£913 0 0
Kynoch & Co.	898 0 0
Langridge & Son	871 16 1
Powsey & Lumley	815 0 0

LONDON.—For the supply of rack-cupboards for three years, to the London School Board:—

Spencer & Co.	£4 17 6 each.
Hammer & Co.	4 15 0 ,,
Wake & Dean	4 0 0 ,,
G. Arthur & Co.	3 7 0 ,,

LONDON.—For the supply of pitch-pine cutting-tables for three years to the London School Board:—

Hammer & Co.	£2 19 6 each.
Wake & Dean	2 19 6 ,,
Spencer & Co.	2 17 0 ,,
G. Arthur & Co.	2 17 0 ,,

LONDON.—For alterations and additions to premises, 53, High-street, Clapham, for the Alliance Banking Co., Limited. Mr. Fredk. Pinches, architect:—

Kynoch & Co. (accepted)	£2,589 0 0

LONDON.—For forming public park for Vauxhall, in South Lambeth road. Mr. C. H. Townsend, architect:—

Adamson	£972 0 0
Chappell	866 0 0
Colls	862 0 0
Nightingale	839 0 0
Downs	833 0 0
Higgs & Hill	779 0 0
Kynoch & Co.	740 0 0

LONDON.—For alterations at the "Waggon and Horses" public-house, Newington Butts. Mr. C. Young, architect, 70, Finsbury-pavement:—

Hedges	£2,545 0 0
Spencer & Co.	2,270 0 0
Colman	2,250 0 0
Drew & Cadman	2,100 0 0
Woraley	1,950 0 0
Mower & Son	1,889 0 0
Higgs	1,873 0 0

ORPINGTON.—For a detached residence at Scads Hill, Orpington, Kent, for Mr. E. Stanley Caton. Mr. St. Pierre Harris, architect and surveyor, 1, Basinghall-street:—

Knight	£1,532 0 0
Somerford & Son	1,479 0 0
Cromwell	1,474 0 0
Holt	1,470 0 0
Otway	1,440 0 0
Payne *	1,300 0 0

* Accepted subject to modification.

ORPINGTON.—For decorations to a house at Orpington. Mr. St. Pierre Harris, architect and surveyor, 1, Basinghall-street:—

Somerford & Son (accepted)	£116 0 0

ORPINGTON.—For additions and alterations at a house in High-street, Orpington, Kent. Mr. St. Pierre Harris, architect and surveyor, Basinghall-street:—

Johnson	£297 0 0
Treadwell	169 0 0
Somerford & Son (accepted)	165 0 0

ST. ALBANS.—For the erection of a baker's shop and cottage, Alma-road, for Mr. S. Norman. Mr. W. A. Fisher, architect, Hemel Hempsted:—

Savage, St. Albans	£546 15 0
W. & A. Cox, Luton	398 10 0
Bushell, St. Albans	375 0 0
Chamberlain, St. Albans (accepted)	370 0 0

STRATFORD.—For repairs and decorations at the Conference Hall, West Ham-lane, Stratford. Mr. F. Boreham, architect:—

Hoskings	£296 0 0
J. Holloway	246 0 0
A. Reed (accepted)	210 0 0

SUTTON.—For additions to "Standish," for Mr. W. A. W. Scott. Mr. Frederick Colyer, architect, 18, Great George-street, Westminster, S.W.:—

S. Page, Croydon	£361 10 0
S. Bird, London	328 0 0
R. J. Humphris, Sutton	310 0 0

SWANLEY (Kent).—For repairs and decorations to a private residence, near Swanley, Kent. Mr. St. Pierre Harris, architect and surveyor, 1, Basinghall-street:—

Somerford & Son	£245 0 0
Taylor	210 0 0
Ians	180 0 0
Lowe (accepted)	177 0 0

TOTTENHAM.—For rebuilding the "Wellington," Green-lanes, for Messrs. Huggins & Co. Messrs. Wilson, Son, & Aldwinckle, architects, 2, East India-avenue, Leadenhall-street, E.C. Quantities supplied:—

Patrick & Son	£3,049 0 0
Peto Bros.	2,940 0 0
Nightingale	2,868 0 0
Ashby & Horner	2,680 0 0
Patman & Fotheringham	2,673 0 0
Jackson & Todd (accepted)	2,548 0 0

UXBRIDGE.—For pulling down and rebuilding back portion of No. 158, High-street, Uxbridge, for Mr. W. Coad. Mr. A. Harry Heroe, architect, Uxbridge:—

First Contract.

Penny, Ealing	£524 0 0
Kearley, Uxbridge	739 0 0
Hardy, Cowley	718 0 0
Brown, Harefield (accepted)	670 0 0
Hall, Uxbridge	665 0 0
Bailey, Ealing	596 0 0

Cricket Pavilion, Eastbourne.—We have received a list of tenders for this work, but, as it is unaccompanied by the name and address of the sender, we cannot insert it.

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TO CORRESPONDENTS.

S. H. (you do not append your name and address to your communication).—G. J.—W. F. P.—J. E.—J. W.—Maraière (if we were in the habit of acting upon anonymous communications or of undertaking any such work as that so coolly asked for in your letter we should certainly not adopt your sinister suggestion to mis-state the locality of the property upon which you wish us to report. We do not make surveys of property and publish the results in our columns, to suit the convenience of would-be buyers or sellers. If your letter be really written in good faith you had better consult and pay an architect or surveyor).—H. F. E.—H. H.—S. A. (should send amount).—C. S. (too late).—S. and S. (answered by post).—C. W. & Co. (we cannot answer your question).—H. H., Oldbury (not required).—A. L. and B. (shall have consideration).—J. E. M. (we cannot).

All statements of facts, lists of tenders, &c. must be accompanied by the name and address of the sender, not necessarily for publication.

We are compelled to decline pointing out books and giving addresses.

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Letters or communications (beyond mere news-items) which have been duplicated for other journals, are NOT DESIRED.

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